Lectures ON DISEASES OF THE NOSE.

Delivered at the London Hospital Medical College,

BY MORELL MACKENZIE, M.D. LOND.,
LATELY PHYSICIAN TO THE HOSPITAL.

LECTURE II.

(*Reported by* DR. GORDON HOLMES.)

GENTLEMEN,—In my last lecture I considered the common and typical form of nasal polypus. To-day we have to discuss the rarer kinds of nasal growth. Some of these are trifling ailments, causing slight inconvenience; others are terrible diseases, giving rise to hideous distortion of the features, immense suffering, and terminating in death. Of the benign growths there are, in addition to mucous polypus already considered, papillomata and fibromata; of the quasi-malignant, sarcoma is the only example; whilst carcinoma originating in the nose is so rare that it may almost be excluded. The fibrous and sarcomatous growths, however, often run a course which places them clinically on a level with cancer.

PAPILLOMATA.

These are of unfrequent occurrence in connexion with the nose. When present they are generally situated on the inner surface of the alæ, and give rise to symptoms resembling those of chronic rhinitis. They are met with most commonly in children, and are productive of a certain amount of irritation, which leads to constant picking of the nose, and consequent slight attacks of epistaxis. They seldom attain a sufficient size to occasion much embarrassment of respiration through the nose, or alteration of the voice. They cannot well be confounded with any other kind of growth, and being situated near the anterior orifice of the nostrils are easily detected on examination. They are usually of a greyish-yellow colour, and have a coarsely lobulated surface. The individual papillæ are generally acuminated,[1] and, microscopically, are found to consist of immature connective tissue, having a papillary arrangement with imprisoned portions of muciparous glands. Thus, Weber[2] compares them to the perisarcomata which occur in the female urethra. As regards treatment the growths had better be cut off by means of curved scissors, or they may be twisted off with forceps. They seldom recur if thoroughly removed.

FIBROUS POLYPUS.

Etiology.—The precise causes which give origin to these tumours are involved in entire obscurity. They frequently become developed shortly before or at puberty, and are less commonly seen as age advances. I have met with a few cases which certainly seemed to result from a slight injury, such as a blow on the nose. They are probably consequent on a subacute inflammatory process, wherein organisable lymph is thrown out, and subsequently nourished by a supply of fine bloodvessels. In this way a growth is formed of considerable density and hardness, but with a low vitality, and it increases at a pace proportionate to whatever vascularity it may accidentally possess.

Symptoms.—The subjective symptoms of fibroma differ at first in no way from those of mucous polypus. As, however, the tumour increases in size, it is accompanied by a series of phenomena much more severe than anything which occurs in connexion with the softer growth. In a twelvemonth from the commencement of a fibroma, the obstruction of the nares may be so great as to render respiration through the nose impossible, whilst the polypus may encroach so much on the pharynx as to interfere seriously with deglutition. Owing to the unyielding nature of the substance which constitutes this tumour, it causes the absorption or displacement of all the surrounding structures according as it advances in size. The firmest osseous framework is utterly powerless to resist the onward march of a fibroma. The septum is pushed to one side, the orbit is penetrated, and the eyeball extruded from its socket, or the cavity of the cranium may be entered and the brain itself subjected to compression.[3]

The peculiar deformity termed "frog face," so characteristic of intra-nasal growths, is met with when the tumour enlarges so rapidly as to push the walls of the antrum outwards on either side, thus distending the upper part of the face, and causing an abnormal separation between the eyes.

Fibrous polypi may grow from any part of the walls of the nasal fossa, but most frequently spring from the basilar surface of the base of the skull, and on this account usually become first visible in the pharynx. They are then called naso-pharyngeal polypi. They are usually distinctly pedunculated, but are very prone to form secondary adhesions at all parts where the opposing surfaces become denuded by pressure and friction. They present the appearance of a red, fleshy-looking mass, which gives a sense of considerable hardness and resistance on being touched with the probe. Their surface is very tender, and liable to bleed from the slightest irritation, and is also very frequently ulcerated superficially at several different points. On this account they are often accompanied by a purulent or even fetid discharge. A few cases are recorded in which these tumours have undergone partial calcification,[4] or have become coated with carbonate or phosphate of lime.[5] Under these circumstances they are liable to be mistaken for osseous tumours.

Pathology.—Like fibrous tumours elsewhere, fibromata originate in connective tissue, and therefore usually spring from the aponeurotic coverings of the bones or from the periosteum itself. Primarily their surface is formed by a layer of epithelium, which, however, soon perishes in great part by pressure and ulceration. Some of these growths, on being cut into, are found to be of an almost cartilaginous hardness, but when they increase rapidly in size their substance becomes much softer, and, on section, can be seen to be intersected by numerous trabeculæ of fibrous tissue. Microscopically they appear to be composed of bundles of compact connective tissue interspersed throughout by elongated nuclei. The softer varieties are very vascular, and are permeated by vessels in all directions. Fibromata manifest a very marked tendency to undergo sarcomatous degeneration, and this is especially seen when they perforate their bony environs and enter the cranium or orbit. Unsuccessful attempts at extirpation are also very likely to be followed by a transmutation in the histological constitution of the tumour, and any part left behind is apt to start *de novo* as a sarcoma.[6] When this change takes place a number of spindle-shaped cells will be found disseminated through the growth, or forming the major part of it.

Diagnosis.—Fibromata are easily distinguished from mucous polypi by their opacity, firmness to the touch, immobility, and want of the hygrometric quality so characteristic of the latter formation. They are generally harder, slower in growth, and more distinctly pedunculated than sarcomatous and cancerous tumours. The absence of any cachexia or deposit in the lymphatic glands serves also to differentiate them from carcinomatous growths. In the case of naso-pharyngeal polypi, if we can ascertain exactly that the primary attachments spring from the base of the skull, but little doubt can remain as to the nature of the polypus. It must be remembered, however, that tumours of intracranial origin occasionally present themselves in the nares,[7] and that very peculiar cases are sometimes met with. Thus an instance occurred in the hospital of Pisa in which a neurilemmatous tumour, connected with the fifth nerve just after its passage through the foramen rotundum, simulated a nasal polypus. Evulsive efforts at extraction were ineffectually made on three separate occasions, and after the last attempt death resulted from acute inflammation of the brain and its membranes.[8]

[1] Durham: Holmes's System of Surgery, vol. iv., p. 292.
[2] Handbuch der Allgemeinen und Speciellen Chirurgie. Von Pitha und Billroth. Bd. iii., p. 200.

[3] See a case by Levret, op. cit., p. 295. Although the patient was a youth only seventeen years of age, the polypus caused death by encroaching on all the cavities in the vicinity of the nose.
[4] Bourdilliat, Fibrome Calcifié, Gaz. Médicale, 1868.
[5] See Cloquet, Osphrésiologie, p. 688.
[6] See O. Weber, op. cit., p. 206.
[7] See Virchow, Die Krankhaften Geschwülste, vol. i., p 185.
[8] Gerdy, Des Polypes, p. 110.

Prognosis.—The size, duration, and rate of growth of the tumour must be taken into consideration, together with the age and general condition of the patient. Even in very advanced stages, when there are ulceration and protrusion through the cheek, a fibroma may be extirpated with the happiest results. The complete removal of the growth at the first operation is a matter of paramount importance; and should recurrence take place, a second attempt can seldom be made with an equal expectation of success. In such a case, of course, the prognosis becomes very much worse, on account of the probability that malignant changes will be manifested in the constitution of the neoplasm.

Treatment.—Any of the methods practised for the extraction of mucous polypi may also be applied to the removal of fibromata, but only when these tumours are seen at an early stage of their growth and are situated within easy reach of the instruments. Owing to the toughness of their attachments and the incompressibility of their substance, they are much more unmanageable than mucous polypi of corresponding size. Nothing can be more injudicious than trying to wrench away a large, firmly-implanted fibroma with powerful forceps, whilst, as Pott[9] remarks, "cases unfit for the forceps are still more unfit for caustic." Caustics, however, have been used from the earliest times,[10] but the impossibility of limiting their action within the nasal cavity in the case of tumours tightly wedged into so confined a space is sufficient reason for their total abandonment as remedial agents under such circumstances. For this purpose the favourite drugs of Dionis[11] were calcantum, orpiment, quicklime, and vitriol. The application of the actual cautery[12] had as early an origin as that of caustics, but is now very properly disused for somewhat similar reasons. The practice, as recommended by Celsus,[13] was to pass a red-hot iron down to the part of the tumour to be burnt through a metal tube previously introduced. Richterus[14] used a triangular sheathed needle which, when heated, he plunged for about an inch into the substance of the growth. All these methods were occasionally attended by a cure, but the patient had usually to pass through a prolonged period of great discomfort while the polypus was rotting, suppurating, and coming away piecemeal. On the other hand, in unsuccessful cases extensive inflammation, great suppuration, or caries of the bones, followed the application, and either resulted fatally to the sufferer or doomed him to almost lifelong torment and disfigurement from ineradicable disease. Another proceeding to which recourse was had occasionally consisted in passing a string round the pedicle of the tumour, and then alternately pulling at each end until in this way the part was sawn through.[15] The impracticability of this measure in most cases is obvious, whereas, when it might be available, the forceps, galvanic cautery, or evulsion by Hilton's snare, may be held to have now superseded it.

Having thus passed over in rapid review the various methods which are at present obsolete, and having indicated sufficiently the treatment to be adopted in the simplest cases of fibroma, it will be necessary, before coming to the severe operations for the enlargement of the natural passages, to consider somewhat carefully the question as to the propriety of ligaturing these growths.

1. *Ligature.*—The first clear allusion to this device for effecting the separation of polypi by interrupting their circulation is to be found in the writings of Giovanni di Vigo,[16] about the middle of the sixteenth century. Since that date the invention has had a very extensive trial, but probably has always been most popular among the advocates of the "gentle treatment." Nevertheless, there is almost always considerable difficulty in getting the ligature round the pedicle of the tumour, whilst in some cases it is quite impossible. On this account nearly every ingenious practitioner who has made a successful attempt to remove a polypus by this means has also devised some new instrument or special method of his own, in order to meet the requirements of the particular case he treated. Thus almost every instance of the kind reported in medical literature is also accompanied by the description of a novel expedient for getting the string into a position suitable to its being tightened efficiently about the root of the growth.[17] It would be useless to attempt here even an enumeration of the various suggestions that have been made, as the practice of ligaturing nasal polypi is at present almost as obsolete as the caustic or cautery. Nevertheless, the proceeding still finds favour with a few practitioners, and is even applicable in cases where the fibroma is not large, and can easily be manipulated, especially when a timid patient shrinks from being subjected to any forcible measures. In such cases the string can be passed round the peduncle much in the same way that the wire of Hilton's snare is got into position.[18] It must not, however, be supposed that the ligature is quite unattended with danger, although Kühn asserts this fact, and refers for proof to all reported examples.[19] He allows, notwithstanding, that the proceeding is often extremely painful, and that on this account the cord has sometimes had to be loosened.[20] In addition, the process of separation is often very protracted, and may be accompanied by serious local and constitutional disturbance and profuse fetid discharges. Mr. Durham[21] has seen a fatal case, and Mr. Spencer Watson[22] states that there is danger of poisoning by the passage of putrid fluids into the stomach. The tumour has also been known to remain firmly attached after the ligature has eaten its way out, and this has most frequently occurred where a wire has been used as the constricting substance.[23] Of course the polypus may have several points of attachment, but reunion may also take place if the ligature cuts rapidly through the pedicle of the growth. M. Levret[24] states that, even if a portion only of a polypus be severed by the ligature, such an interruption to the continuity of circulation through the tumour results that the whole mass usually undergoes a spontaneous separation at its base. He gives some examples from his own practice which support this assertion. On the whole, the author cannot himself recommend the use of the ligature for intra-nasal growths. It possesses but one slight and doubtful advantage—i. e., freedom from hæmorrhage. It is at best an incomplete mode of treatment, dependent for a successful result more on chance circumstances than on the skill and judgment of the practitioner. It is but a slovenly substitute for a rapid and decisive operative measure, and can never hold a place in the category of the experienced and accomplished surgeon.

2. *Enlargement of the outlets of the nasal fossæ.*—The slighter operations for this purpose have been described under the head of Mucous Polypi. In the case, however, of large fibromata, which have displaced all the surrounding structures so as to form for themselves a cavity of abnormal extent by their encroachments on the nasal fossæ and antrum, the removal of a considerable portion of their external coverings becomes necessary in order to dislodge them completely from their bed. With this object we may expose them, either anteriorly by Langenbeck's method, or by excision of the upper jaw; or inferiorly, by operating through the hard and soft palate. The former measures are generally the most efficient, and are most frequently adopted by eminent surgeons, whilst the latter is a less severe operation, and causes no disfigurement of the features.

3. *Langenbeck's operation.*[25]—From the junction of the nasal and frontal bones an incision is made vertically downwards along the mesian line of the nose to the upper margin of the alar cartilage, along which the knife is then carried outwards to the cheek. The triangular flap thus formed is dissected off, avoiding any interference with the periosteum, and the alar cartilage severed from its attachments to the bone superiorly. The nasal bone is then separated from its fellow of the opposite side by the bone nippers, and in the same way the nasal process of the superior maxillary is cut away from the body of the bone. The quadrilateral plate of bone thus formed is only connected with the frontal by its periosteal and mucous investments, and should be now forced upwards by means of an elevator, so as to lay open the whole upper part of the nasal cavity.

9 Op. cit., p. 56.
10 Hippocrates, De Affect., sect. 6.
11 Cours d'Opérations de Chirurgie, 4th ed., by M. de la Faye, p. 570.
12 Idem., De Morbis, lib. ii., c. 34.
13 Lib. vi., c. 18.
14 Kühn, Nonnull. quib. Polypi Narium extirpari Solent Method. Dijudicatio, p. 6.
15 Gruner, op. cit., p. 30.
16 Pratica Utilissima e Necessaria di Cirurgia (Venezia), 1558), l. ii., p. 71.
17 See Kühn, op. cit., part ii., p. 6.
18 See M. Levret's work already cited for a complete description of various methods of ligaturing polypi. Also an Account of some New Instruments for Tying Polypi, by Wm. Beaumont; London, 1838.
19 Op. cit., part ii., p. 10.
20 Ibid., p. 7.
21 Op. cit., vol. iv., p. 309.
22 Op. cit., p. 294.
23 Ibid., p. 285.
24 Op. cit., p. 278.
25 Deutsche Klinik, 1861, p. 291; also Schmidt's Jahrbucher, cxiii., 195.

Having removed the tumour through the gap thus made, either by the knife or forceps, all the parts disturbed should be accurately replaced *in situ*. This operation can of course be somewhat modified according to circumstances, and, for instance, may be combined with Dr. Rouge's method as described in my lecture on Ozæna.

4. *Excision of the upper jaw.*—Mr. Tatum[26] was the first surgeon in this country who performed this operation for the removal of a fibrous tumour. It has frequently been practised here since that time, and has undergone various modifications with respect to the amount of the division of the bone. The resected portion of the maxilla may also be replaced, but if not, the void produced is soon filled up by dense fibrous tissue. The steps of the operation are generally as follows:—The first incisor tooth on the side of the jaw about to be removed is extracted as a preliminary proceeding. An incision is then made from the inner canthus of the eye along the side of the nose, and continued through the whole thickness of the lip in the mesian line. A second incision may be made from the malar bone to the angle of the mouth, but is not generally necessary. The flap thus formed being dissected upwards, the bone is well exposed, and the cutting forceps is then called into requisition, one blade being placed inside the nostril and the other in the direction of the inner margin of the orbit in order to divide the intervening portion of the jaw. The maxilla is separated by the same instrument from its fellow of the opposite side at the point where the tooth was extracted. The malar tuberosity is then sawn through by means of a Hey's saw, and the soft palate being divided in the middle line is reflected. The bone must be carefully freed from the superior maxillary nerve and other soft parts, when it can be seized by lion-forceps and twisted out. In most cases the orbital plate may be allowed to remain, and the subsequent deformity is then much less. With this view recourse must be had to the cutting-forceps for the third time, in order to divide the bone along the lower margin of the orbit, the rest of the operation being carried out precisely as before. When the bone has not been much damaged it is better to replace it after the growth has been removed. As a last step the soft parts must, of course, be carefully adjusted with sutures. In all cases it is advisable to apply the actual cautery to every point where the tumour has been severed from its attachments, as this proceeding not only stops the hæmorrhage, which is usually very profuse, but also materially lessens the prospect of recurrence of the fibroma.

5. *Nélaton's operation.*[27]—An extension of the operation practised by Dionis,[28] to which allusion has been made in my lecture on Mucous Polypi. It does not allow of such freedom of access to the nasal fossæ and the base of the skull as the preceding measure, and on this account is inapplicable to the extraction of very large tumours. The soft palate is divided in the mesian line, and the incision is continued forwards to the margin of the teeth, from which point a second cut is made obliquely outwards for about an inch. The flap thus formed is dissected up, and the bones constituting the floor of the nose, being thus exposed, are cut away with forceps. The mucous membrane of the nares is then divided, and as much of the septum removed as is required to completely lay bare the growth. After its removal the flaps should be replaced, but the restoration of the divided soft palate had better be left for a future time.

CARTILAGINOUS GROWTHS.

Etiology.—These tumours are not very often met with in the nose, but, when then they do occur, most frequently affect the young. Originating in some obscure local diversion of nutrition, they are apparently idiopathic formations, and no external causes can be referred to as exercising any influence over their production.

Symptoms.—The usual mechanical symptoms of nasal obstruction accompany cartilaginous tumours. As they advance in size there is also more or less pain, and often considerable discharge. Extreme deformity of the countenance is generally attendant on this class of growths, as most of them are entirely incapable of yielding in the least to the pressure of surrounding structures, and they sometimes enlarge with great rapidity.[29] They are characteristically globular in shape, and take their origin most frequently from the cartilaginous septum, but also very often from the frontal and ethmoidal cells. In the latter case the upper part of the tumour is usually in contact with the under-surface of the brain, thus rendering operative interference impossible.

Pathology.—Cartilaginous tumours vary much in consistence, being occasionally quite soft, but as a rule tolerably hard. Microscopically they display considerable diversity of structure, but more nearly approach that of fœtal cartilage. They are very liable to undergo true ossification, whilst on the other hand they have also been known to degenerate into sarcoma.

Diagnosis.—This must be ascertained by attention to general symptoms, and by a process of exclusion. They are never pedunculated, seldom ulcerated, and probably present more smoothness of surface, and are more symmetrically globular, than any other intra-nasal growths.

Prognosis.—Those cases in which the tumour springs from the base of the skull probably always lead to a fatal result. When the growth takes origin from the cartilaginous septum or walls of the nasal fossæ, it may be removed in the usual way; but even in these instances, if it has already attained to any considerable size, there is a great likelihood that denudation of the under surface of the brain has taken place.

Treatment.—No special method of procedure is called for in treating this class of tumour, and they must be removed when practicable by the aid of some of the measures already described. One of the characteristics of cartilaginous growths is to cause *absorption* more readily than *displacement* of the surrounding bones. On this account they easily penetrate the cranium, and this occurrence excludes, of course, the advisability of any undertaking for the extraction of the tumour.

OSSEOUS GROWTHS.

Etiology.—Three classes of bony formations are met with in the nose. First, exostoses, or growths from the bones, which may be the result of strumous or syphilitic disease of the osseous framework of the nasal cavity; secondly, ossified cartilaginous sarcomatous growths; thirdly, the peculiar osseous tumours which are developed independently of any apparent disease of the bones or soft parts, and always remain more or less free and movable. These latter formations possess a special interest, and almost all we know about them is derived from the observations of Dr. Paul Olivier, as set forth in his treatise, "Sur les Tumeurs Osseuses des Fosses Nasales" (Paris, 1869). This author has collected eleven cases, and I am indebted to his labours for most of my knowledge of this rare class of disease.

Symptoms.—These are similar to those of other intra-nasal tumours. There is perhaps more pain of a neuralgic character and more marked epistaxis in the early stages than occurs in connexion with other growths. As soon as the bony formation becomes large enough to exert pressure on the surrounding parts, spontaneous hæmorrhages usually very much diminish or cease altogether. Displacements of the eye, together with strabismus, inability to close the lids, chemosis, conjunctivitis, &c., are also more common than in other cases. Sometimes the mucous coverings of the formation became eaten away by ulceration, and the bony tissue can be seen or felt by the finger or probe. When seized by a forceps, the isolated growths can usually be moved to some extent from side to side, or at least shaken.[30] Some of these tumours have an ivory-like density and hardness, others have a friable, cancellated structure. In the former case the surface is frequently nodulated, whilst the latter variety is generally characterised by uniformity of outline. An exploring needle should always be used to complete the diagnosis. It should be inserted several times, as in the lighter kind it may possibly penetrate one of the cancelli, and thus enter the substance of the growth to a considerable depth.

Pathology.—Exostoses, whether compact or cancellated, present the arrangement of Haversian canals &c. characteristic of true bone. The free osseous tumours are more heterogeneous in their structure, consisting of an ossific deposit in which cells and nuclei are sparingly discernible. The portion once produced is probably incapable of under-

[26] Brit. Med. Journal, 1868.
[27] See Bulletin de la Société de Chirurgie, v. i., p. 159.
[28] See p. 120.
[29] See two cases in Cooper's Surgical Dictionary; and Prochaska, Disq. Anat. Physiol. Organismi Corp. Hum., p. 172 (Vienna, 1812).
[30] In a case reported by Dr. Duka (Trans. Patholog. Soc., vol. xviii., p. 256), the denuded bone had a blackened appearance.

going any further change unless an increase in size by additions to its external surface. On the other hand, the exostoses sometimes become necrosed from an interruption to their circulation. The osseous tumours generally appear to be developed between the layers of the Schneiderian membrane.

Diagnosis.—Visual inspection, combined with careful examination by means of the finger, probe, and exploring needle, will soon lead to a correct opinion respecting these growths. Even in the earlier stages, when they are completely invested with mucous membrane, the bony tumour imparts a sensation to the finger which the *tactus eruditus* will unhesitatingly accept as conclusive.

Prognosis.—Generally favourable unless the tumour has been allowed to attain such a size as to have reduced the patient by interfering seriously with deglutition. In some cases, persistent slight hæmorrhage and continued fetid discharges from extensive ulcerations threaten the life of the patient if he cannot be promptly rescued by surgical measures. In one fatal instance which has been recorded, the tumour was found at the post-mortem to have penetrated the cranium and to be lying in contact with the under surface of the brain.[31] Of course, in such a case it would be out of the question to adopt any radical method of treatment, and a fatal issue must sooner or later be inevitable.

Treatment.—The tumour must be removed as soon as it can be determined that operative interference is justifiable. In the earlier stages the extraction can be accomplished *per vias naturales*, but when the growth cannot be taken away without making an artificial opening, any of the measures described in the preceding chapter can be put into execution, but usually with more or less modification. Generally speaking, the practitioner must exercise his own judgment with regard to the situation, size, and shape of the aperture, as, owing to most of these tumours being altogether incompressible, they cannot always be got out by means of the conventional operations.[32] The cancellated variety is occasionally so friable that M. Olivier,[33] suggests that an attempt should be made to crush it before proceeding to enlarge the outlets of the nares. The details of several operations by Richet, Jenoir, Dolbeau, &c., are given in M. Olivier's pamphlet, which ought to be carefully perused by any surgeon who happens to have one of these cases under his care.

QUASI-MALIGNANT GROWTHS.

Sarcoma is the only representative of this class.

Etiology.—Pigræmus[34] was the first to differentiate these growths from other nasal polypi, and to apply to them the appropriate term sarcoma. As before mentioned, mucous and fibrous polypi, and enchondroma, may degenerate into sarcoma, especially when subjected to any irritative process, natural or surgical. In other cases, sarcomata appear to originate from the first as characteristically fleshy and succulent tumours, with no distinct etiology or affinity with neoplasms belonging to a different class.

Symptoms.—The usual tendencies of malignant disease, as regards softening, ulceration, fungating granulations, hæmorrhages, and fetid discharges, are in most instances manifested by sarcomata, and superadded to the general symptoms of intra-nasal growths. Some of the features of cancer are, however, generally altogether absent, especially infiltration of adjacent glands and tissues, and constitutional cachexia. These tumours are almost always accompanied by distressing pain, and whilst they grow with considerable rapidity they show a great inclination to penetrate the bony walls of the nares so as to enter the cranium or orbit, or to protrude through the cheek or bridge of the nose. On inspection sarcomata present the appearance of a lobulated, fleshy-looking mass, which may vary greatly in colour, being in some cases bright red, and in others of a dirty ashen hue. They have generally a broad basis of attachment, but may grow from one or more rather thick pedicles. They spring most frequently from the sides of the nasal cavity, and differ from fibrous polypi in being but seldom implanted on the base of the skull. They vary as much in consistence as they do in colour, being at one time of a cartilaginous hardness, whilst at another their contents are so nearly fluid as to convey an indistinct sense of fluctuation to the fingers. In children a kind of sarcoma of very rapid growth and malignant tendencies is sometimes met with. This variety has been observed to invade many of the adjacent cavities, as the cranium, orbit, and pharynx, almost simultaneously.

Pathology.—The histological constitution of sarcomata causes them to occupy a position between fibrous polypi and true cancerous tumours. On section they are found to be composed of fibrous tissue, the interstices being filled up by a plastic substance or blastema. The wide variations in physical characters that are observed in different cases are explained by the facts that one or other of these elements may greatly predominate, and that the blastema may be of a jelly-like or gelatinous consistence, or may resemble a firm, lardaceous, cheesy matter. Sarcomata are generally very vascular, and are invested by a capsule, which, however, is often so attenuated as to be scarcely traceable. Microscopic examination reveals numerous caudate nuclei and cells, which in the softer and rapidly growing varieties are present in greatly increased quantity.

Diagnosis.—Sarcomata can scarcely be confounded with other tumours, unless it be with true cancers. In the nose they are much more frequent than the latter kind of growths, and can generally be recognised by their occurring at an earlier age and by their displaying a much milder type of malignancy.

Prognosis.—If left to themselves, these growths progress steadily towards a fatal issue, and finally destroy the patient by encroaching on the cranial cavity and setting up some acute or insidious brain mischief, or they undermine his constitution by pain and long-continued fetid and sanious discharges. If, however, they can be completely removed before serious general symptoms have manifested themselves, they seldom recur. Everything depends on their total extirpation being effected by the first operation; and should the tumour return, it is with a great access of malignancy and rapidity of growth.

Treatment.—The same operations as are practised for the removal of fibrous polypi, especially resection of the upper jaw, are required for the extraction of sarcomatous tumours. The greatest care should be taken to excise every portion of the soft parts surrounding the growth which exhibit the slightest appearance of disease.

CARCINOMA.

Etiology.—True cancer originating in the nasal fossæ is a very rare disease, although epithelioma, scirrhus, and encephaloid are usually mentioned as affecting this part. The few cases of cancer which occur in children are most frequently found to be situated in the meningeal, pharyngeal, or orbito-nasal regions. In many of such instances the disease, when advanced, would often assume the appearance of springing from some point within the nasal cavity, and at a post-mortem only could the true site of origin be determined.[35]

Symptoms.—It is unnecessary to enumerate here the train of phenomena, local and constitutional, which are the inseparable attendants on all manifestations of cancer. In the earliest stages there will be, of course, the usual doubt as to the real nature of the disease; but the rapid growth and the ulceration of the tumour, independent of mechanical causes, soon give positive evidence of the distinctive malignancy of the formation.[36] Great pain, with fetid and sanious discharges, shortly supervene; and as the tumour increases in size all the neighbouring parts become more or less affected or interfered with as regards their physiological functions. The eyeballs are protruded from their sockets, the disease eats through the tissues forming the front of the nose and the cheek, the base of the skull is perforated, and cerebral symptoms ensue. In some cases the soft palate becomes early involved, when deglutition is shortly rendered impossible, and the patient perishes slowly from inanition.

Treatment.—As the disease is necessarily fatal, none but palliative measures can be adopted. Operative interference only shortens the life of the sufferer and adds increased misery to his existence. Opium or morphia should be administered freely when pain is a prominent symptom; and if the patient becomes reduced to a state of aphagia, resort must be had to nutritive enemata.

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31 Trans. Patholog. Soc. vol. xix., p. 311.

32 See a case of exostosis removed by Dr. Mott, Amer. Jour. Med. Sci., Jan., 1857, p. 35.

33 Op. cit.

34 Glanderp, op. cit., cap. vi.

35 See Catalogue of St. George's Museum, series xvi., 47, 48. Case occurring in a child, aged four.

36 See an illustrative case by Mr. Spencer Watson, op. cit., p. 287.

ON THE USE OF THE ASPIRATOR IN HEPATIC ABSCESS.

BY E. H. CONDON, M.D.,
SURGEON-MAJOR, ARMY MEDICAL DEPARTMENT.

(*Continued from p. 235.*)

CASE 5.—Veterinary Surgeon C. J. G——, R.H.A., aged twenty-four years; service three years. On April 23rd, 1874, I was a member of a board of medical officers assembled at the Capper House Hotel, Madras, to report upon the state of health of this officer. He arrived from Bangalore the day before accompanied by a medical officer, as he was too ill to travel alone.

The following is an epitome of the detailed medical history received from his previous medical attendant, dated Bangalore, April 21st, 1874: "Came to India in December, 1871, and soon after his arrival he suffered from inflammation of the cæcum and dysentery. In the following year he suffered from typhoid fever. His present illness commenced about the 14th of March, 1874. After having returned to Bangalore from a long march with a battery from Kampton, he was suddenly seized with a severe attack of acute hepatitis. There was great pain and tenderness, and considerable enlargement of the liver, marked rise in temperature ranging up to 104° Fahr. The acute symptoms have now subsided, but the liver can be felt and seen to be enlarged; the ribs are bulging out anteriorly, and the intercostal spaces are obliterated. To the touch, the liver gives the feeling of a solid non-fluctuating tumour; he has no rigors. There is a marked improvement during the past few days. Temperature normal in the morning, and 101° in the evening. He is recommended for a lengthened change to England. He was treated at first with leeches, fomentations and poultices locally, with chloride of ammonium and diaphoretics internally. Subsequently, nitro-muriatic acid and blisters to side. At the present time iodide of potassium and infusion of chinchona."

The patient was very much shaken by the journey from Bangalore (about 200 miles by rail), and wearied from its effects. Abscess of the liver was diagnosed, and he was detained in Madras for further treatment.

On the 27th of April he was transferred to the General Hospital, and placed under my care. He arrived at the hospital in the evening. He was put into a small quiet ward upstairs, placed on an air-bed under a punkah, with instructions not to rise from his bed on any consideration. He was very feeble and emaciated, with a sallow, anxious expression of countenance and hurried respiration. No jaundice. There was great enlargement of the whole right side, and a fluctuating tumour bulging out below the ribs. On the following morning (28th April), assisted by Surgeon-Major Lougheed, 21st Fusiliers, and Surgeon-Major Paul, of Madras (who kindly gave us his valuable advice and assistance, and also the use of an aspirator), I punctured the abscess half an inch below the cartilage of the last true rib in a direct line below the right nipple, and drew off ten ounces of thick brownish pus, free from smell; the opening was hermetically sealed with collodion and a broad flannel bandage put on tightly. He was ordered strong beef-tea, mutton-broth, chicken-broth, &c., every two hours, with custard-pudding, &c., a pint of iced champagne with his luncheon, with iced claret and soda-water to drink when thirsty. To take a mixture of nitro-muriatic acid and bark.

May 3rd.—He was relieved by the operation, and passed a good night after it. The bulging under the ribs disappeared, but the general enlargement of the side was little reduced; the difficulty of breathing was much relieved, but it has become somewhat rapid again; takes his nourishment well; bowels opened by a purgative enema. He has had a rigor almost every night since last report. Abscess full and painful. Dr. George Smith (of Madras) kindly lent his aspirator, as there was not one to be had in the medical stores or elsewhere in Madras. Pus to the amount of four ounces was drawn off; same character as before, but thicker. The puncture was closed with a small piece of adhesive plaster (which answers quite as well as collodion), and his side covered with a large piece of spongio piline wrung out of hot water. He experienced immediate relief from the operation, although the abscess was not emptied, owing to the aspirator not acting well.

6th.—Patient has progressed favourably since last report until to-day, when he seemed very weak and wearied, and refused to take his nourishment. Abscess full and very painful. The largest needle of the aspirator introduced half an inch in front of the last puncture, and six ounces of pus drawn off; he seemed to feel the operation more than last time, probably owing to his being weaker. In the evening he was much easier; no pain to speak of, but he feels weak. Ordered egg flip and jugged broth every two hours alternately during the night. Two glasses of good port wine added to his nourishment.

7th.—Considerably better this morning; had a good night. Pulse stronger; side much easier. To continue his nourishment.

10 h.—Had a short attack of fever about noon on the 8th, during which his temperature went up to 103°, otherwise he continued much the same since last report; takes his nourishment well. Again used the largest-sized trocar of the aspirator, and drew off twelve ounces of pus, which gave him great relief.

14th.—General health improved; digestive powers good. To be allowed any kind of solid nourishment which he can take. Fourteen ounces of pus taken from the abscess, the first two ounces thin, the remainder thick, and presented different shades of chocolate colour. There was quite a hollow under the ribs after the operation, corresponding to the emptied abscess; a pad and bandage were placed over this to support the abscess. The operation gave much relief.

18th.—Attacked with severe pain in the side and difficulty of breathing; anxious expression of countenance. Tapped the abscess to the amount of ten ounces, which gave him immediate relief.

20th.—Improved generally; digestion good; takes a variety of solid food, including beefsteaks and mutton-chops; bowels act well; five ounces of pus taken from the abscess. As the abscess causes great pain and constitutional disturbance when it becomes distended, it is determined to tap it in future before it becomes quite full.

22nd.—Seven ounces of pus drawn off; rigors occur almost every night.

24th.—Takes his food remarkably well, but he does not gain flesh. Seven ounces and a half drawn off; abscess much smaller and very tender inside when touched by the instrument.

26th.—Fourteen ounces drawn off; bowels confined. To have a purgative enema.

29th.—Matter has begun to ooze from the opening; six ounces drawn off.

31st.—Abscess much smaller; two ounces of bloody pus removed; the atmospheric pressure on the abscess after it has been evacuated causes much pain.

June 2nd.—Three ounces and a half of bloody pus removed. Although the abscess is reduced to a mere sinus, his side is still greatly enlarged and bulging out posteriorly. No fluctuation can be detected after the most careful examination.

4th.—Two ounces and a half of pus removed.

7th.—A second abscess has long been suspected to exist, as the size of his side was so little reduced; his temperature continued high, his pulse quick, and his respiration hurried, and rigors were of almost nightly occurrence. Slight fluctuation was discovered to-day at a spot between the eleventh and twelfth ribs near their angles (a line drawn from the centre of the right axilla to the great trochanter, as he lay in bed, would fall across the spot). A needle, about the calibre of a fine knitting needle, was inserted here, and twenty-one ounces of typical liver pus drawn off; the needle became choked by a shred, and had to be withdrawn, and, as he was rather exhausted, it was not inserted again. There is no communication between this abscess and the old one. Up to the present time his spirits continued very good; the discovery of the second abscess has depressed him very much. Two ounces of pus taken from old abscess.

9th.—Much relieved; the area of hepatic dulness much less. An ounce and a half of pus taken from old abscess.

12th.—Tapped second abscess with fine trocar, and drew

off thirty ounces of pus. The area of hepatic dulness fell considerably during the operation, and some of the intercostal spaces were sucked in, which gave the side a peculiar appearance, and the respiration fell from 36 to 24.

16th.—Sixteen ounces of pus removed from second abscess. The right lung is seen to act more freely. Takes his food well.

21st.—Sixteen ounces taken from second abscess. An ounce and a half of thick bloody pus taken from the old abscess every day since the 9th. As the matter runs from this abscess freely, it is not thought necessary to use the aspirator again.

25th.—Had a slight attack of fever about noon yesterday, which took away his appetite. Feels feverish and uncomfortable to-day. His side, over the seat of the second abscess, is œdematous. Had some difficulty in tapping the abscess, as the aspirator is a bad one and does not make a good vacuum; succeeded, however, in removing nine ounces.

29th.—Tapped second abscess to the amount of twelve ounces.

July 3rd.—Eleven ounces taken from second abscess.

7th.—His side is smaller on the whole, and is gradually returning to its normal shape and size. Eight ounces taken from the second abscess, and when the cannula was withdrawn a few drops of blood oozed out; this never occurred before. The instrument was inserted in the same place as last time.

9th. — The weather has been exceedingly hot and sultry for the past few days, with an absence of breeze, which is exerting an injurious influence on the patient. To be taken to the beach in a "dhooly" for an hour in the cool of the evening.

12th.—Has been troubled with night-sweats for the past few nights. No hectic flush on the cheek. Two ounces of pus taken from the second abscess. He enjoys his trip to the beach every evening.

16th.—When tapping the abscess this morning the glass of the aspirator cracked in several places. Two ounces only drawn off.

17th.—As there was not another aspirator in the medical stores, had to send to Poonvanallee—a distance of fourteen miles—for one. Drew off four ounces with difficulty.

21st.—Drew off three ounces of pus; could not get any more, from some unaccountable cause; but abscess not empty. The old abscess is gradually closing; no smell from it.

24th.—His appetite is now very bad; he cannot take food with any relish, and is very thin and weak. Feels the heat very much. His drive to the beach every evening revives him. His side is much improved; there is not much difference now between his right and left side. Twelve ounces of pus taken from second abscess.

29th.—Drew off twelve ounces of pus. He fainted immediately the instrument was withdrawn, and continued very weakly all day. The heat is now excessive night and day, and quite takes away his chance of recovery; he is so weak and his appetite so bad, that it is thought he cannot live very long, and as a *dernier ressort* it is proposed to put him on board the next P. and O. steamer for England, which calls at Madras on the 2nd August. Had an interview with Dr. Massey, the Surgeon-General (who kindly visited the patient), and he concurred in the opinion that immediate change afforded the only chance of recovery.

Aug. 1st.—Passed the last two days in much the same state; very much depressed from the heat, and unable to take nourishment; tapped the abscess, but only succeeded in obtaining two ounces of matter; there is not the slightest smell in the pus issuing from the old abscess, and there is no ulceration at the opening. It was intended to put him on board the P. and O. steamer *Peshawur* at daylight this morning, but he was found too weak and faint to be moved; it was therefore put off until 4 P.M., when, with the aid of his friend Major B——, the hospital sergeant, and a couple of orderlies, we got him on board very comfortably, the dreadful surf notwithstanding. He was placed in an airy, comfortable cabin, accompanied by his servant, and a ship's steward told off to attend to him. I explained his case to the medical officer of the ship, who was a most intelligent young surgeon, and handed him an aspirator with which to tap the abscess as often as necessary.

I have learned the following particulars of the case during the passage home from one of his fellow-passengers, who was much interested in him. (I regret to say I got no information of the case from the ship's surgeon):—He arrived at Galle on the 5th August, when he was much improved in general health, and in a fair way to do well. He was here transhipped to the P. and O. steamer *Cathay*, and came under the care of another surgeon. The abscess was tapped while the ship lay at anchor, and a large quantity of matter removed. The abscess was again tapped on the 15th, and about thirty ounces of pus drawn off. Some days after this he began to complain of pain in his side, which was very severe at Suez, and became agonising before he reached Malta, where he was said to have had an attack of "dysentery" (?). It was said that the abscess was tapped frequently, and large quantities of matter taken away. A very offensive smell was noticed to proceed from his cabin during the latter part of the voyage, and on arrival at home there was an ulcer as large as the palm of one's hand over the seat of the first abscess. He arrived at Southampton in a dying state, and expired in the ambulance on his way to Netley on the 177th day of the disease.

During the course of the disease his temperature ranged from 98° to 103° F., but as a rule the thermometer in the axilla stood at 99° in the morning and 101° in the evening. Pulse ranged from 76 to 136 beats in a minute, usually about 100 in the morning and 120 in the evening. Respiration ran up to 36 and 40 in a minute, usually somewhat higher at night, but by no means uniformly so.

Remarks.—There are several points of interest in this case. It illustrates the extent to which the liver may be diseased without destroying life, interfering with digestion, or causing jaundice. The enormous quantity of pus taken from the liver in this case (about four hundred ounces) is, I believe, the largest quantity of pus taken from a human liver on record. No unpleasant smell occurred from either abscess while he was under treatment on shore. Only on one occasion did air enter the abscess. My finger slipped off the hole by accident, and air rushed in with a whiz. I immediately applied the aspirator, and exhausted the air again, and no evil consequences followed. The temperature was regularly higher at night than in the morning, and rigors were not noticed until the abscess was tapped. The large amount of stimulants consumed daily were found to be absolutely necessary to keep him up, for any curtailing of his stimulants pulled him down at once. He consumed a pint of iced champagne every day, with no small quantity of claret, besides port and sherry, and an occasional "peg" (brandy and soda). He was very fond of beer, but he dare not touch it, as it made his side worse at once. (Beer-drinkers in India, take warning.)

It is well to remember the exceedingly irritating nature of pus from abscess of the liver, hence the necessity of cleansing the instrument scrupulously after using it. So important is this that the surgeon ought to do it himself to avoid accident. If any pus is allowed to lodge about the edge of the opening of an abscess it is liable to cause intractable ulceration. It is highly probable that in this case there was a third abscess, which caused the intense pain, pointed downwards, and probably formed adhesion to the angle of junction of the ascending and transverse colons, and discharged some of its contents into it, causing the so-called "dysentery" (he had no tendency to dysentery during his treatment on shore). Had not this further complication occurred he would probably have recovered.

Note.—I have learned that the ship's surgeon had a leech bite on the tip of one of his fingers, into which some of the matter found its way on one occasion when he was tapping the abscess; his hand and arm became very much inflamed and painful, and he lost the top of his finger, which was not healed six months afterwards.

CASE 6.—Captain A. H. R——, R.A., aged thirty-three years; service sixteen and a half years (all passed in India). This officer arrived at Fort St. George, Madras, from Bangalore, on the 21st July, 1874, *en route* to England. The abstract of his case stated that he had had very indifferent health for some time prior to the 28th June, 1874, when he was placed on the sick list suffering from a severe attack of hepatitis. On his arrival at Madras he was somewhat emaciated and very feeble; not able to walk without assistance; suffering a good deal of pain in his right side, which was enlarged; he was expectorating brownish pus unmixed with phlegm in small quantities, evidently from an abscess in his liver. He improved in his

general health the first few days after his arrival, until the morning of the 28th July, when he became much worse. He ceased to expectorate pus the evening before, his temperature ran up, his side became dreadfully painful, and he was so weak that he could not rise from his bed, and altogether he was very ill. Under these circumstances I determined to make an effort to evacuate the abscess without further delay. Fortunately I had the aspirator with me. I showed him the needle and explained to him what I proposed to do. He was greatly alarmed, and stoutly objected; his wife very sensibly reasoned with him to trust himself altogether in my hands; still he would not hear of it. He thought it "a monstrous thing to poke up a fellow's liver in that way." However, I told him firmly but kindly that I should do it, as I considered it most important, and reassured him as to its perfect safety. He consented rather as a matter of necessity, and in much fear and trembling as to the result. After a minute examination of his side, I explored his liver in two places, but failed to find pus. In the evening I found him sitting in the verandah of his quarter looking quite comfortable, and suffering no pain in his side. He told me that the operation had taken away the pain, and given him complete relief. He said: "For a month past I have not been able to straighten myself with the pain in my side, and now I can walk about as straight as an arrow; in fact, I am a different man. You can explore my liver now as often as you like." Mrs. R—— said that she was perfectly astonished to see him walk about with "a firm step, what he had not been able to do for a long time."

On the following day he again began to expectorate pus, which prevented me from searching further for the abscess. He continued to improve, and I saw him on board the P. and O. steamer *Peshawur* on the 2nd August, *en route* to England. I learned from Mrs. R—— (who was kind enough to write me news of him from Galle, Aden, Suez, Alexandria, and Malta) that he continued to improve, and had no return of the severe pain in his side, and that the liver disease gradually improved. The irritating matter from his liver, however, set up extensive disease of the right lung. He had an attack of hæmoptysis soon after his arrival at home, which recurred at intervals, and carried him off after a few months.

Remarks.—I wish to direct attention to two points in this case. First, the great objection which poor R—— had to have his liver explored; and I have found the same objection to exist in every case to a greater or less extent. There is perhaps no other simple surgical operation to which the "Britisher" has so great an objection—not in consequence of the pain it causes, for it only gives a short sharp pain while the needle is passing through the skin and muscles—once the instrument enters the liver it causes no pain; but there is a general though most ungrounded prejudice against the operation, which medical officers should be prepared to meet. Secondly, the almost immediate and permanent relief of the urgent symptoms which followed the operation was very remarkable. I am not at present prepared to give a physiological explanation of the marvellous effect produced by simply puncturing the liver deeply in two places with a needle. When the abscess is found and evacuated, it is easy enough to understand the relief which follows. Perhaps others can throw light on the subject.

(To be concluded.)

THE MURIATE OF CALCIUM AS A THERAPEUTIC AGENT.

BY ROBERT BELL, M.D., F.F.P.S.G.,

PHYSICIAN TO THE GLASGOW INSTITUTION FOR DISEASES OF WOMEN AND CHILDREN, ETC.

I TRUST that a short time spent in considering the therapeutic properties of a salt which has been till quite recently thought of such little value in the treatment of disease that in some works on materia medica it is not even classed as a therapeutic agent, may be of advantage to the readers of THE LANCET. Chloride of calcium is an agent which, I am sure, only requires to be more thoroughly understood to be appreciated as a remedy, and to be valued as a pharmaceutical preparation. That it has not hitherto entered largely into the prescriptions of medical men in this city may be inferred from the following incident. I wrote a prescription, the principal ingredient of which was the chloride of calcium; this was made up at a most respectable dispensing druggist's shop. In a day or two after, the mother of my little patient came to me complaining that her daughter had only been able to take the medicine once or twice, as it produced such obstinate vomiting. What was my horror on finding that chlorinated lime had been used instead of what was ordered, and a most sickening compound was the result. On my going to the principal of the firm where the mistake had been made, he coolly told me that he knew of no other chloride of calcium than the one he had used. I mention this incident to show how very rarely this potent remedy has been taken advantage of.

Chloride of calcium possesses a most wonderful power in controlling, if not actually curing, many forms of tubercular disease. In my experience I have found no remedy on which so much reliance can be placed in tuberculosis as on this salt; more especially, however, this remark applies to the wasting diseases of children. It has been most extensively used by me during the past four years, and with most gratifying results. Having prescribed it in every form of tubercular disease that has come before me during this period, perhaps a short account of my observations on the effect of the drug may not be uninteresting.

In the wasting diseases of childhood, be these tubercular or not, chloride of calcium has proved itself to be, in my experience, a therapeutic agent of inestimable value. The conditions which indicate the probable usefulness of the salt in children are, first of all, a falling off in flesh. The child may take his food heartily enough—nay, his appetite may be better than usual,—yet he becomes more attenuated every day, he is languid, ofttimes sleepless, and the pupils are always very much dilated. When sleep does come on, the little patient frequently starts up in a fright, grinds his teeth, and convulsive twitching of the muscular system will often be observed—these symptoms being evidently due to a large amount of undigested food in the lower bowel. Ofttimes there is a craving for stimulants, and a most extraordinary liking for potatoes and other articles of diet containing a large amount of starch. If the mother is questioned, the remark will often be made that the child takes his food so well as to make it quite beyond her power to understand how he does not thrive, but, on the contrary, is falling off every day. And it is remarkable to note how rapidly a fat and healthy-looking child will become a mere shadow of his former self when such a train of symptoms are present. When we come to examine the patient, the face may appear to be pretty plump, but the arms and legs are miserably thin, soft, and flabby, while the abdomen is greatly distended, having the cutaneous veins very much engorged. The evacuations should always be examined, when it will be observed that they are much greater in quantity than they ought to be, that undigested food can be largely traced in them, and that their fetor is excessive. Such a state of things distinctly points to great defect in the powers of digestion and assimilation. In fact, none of the food appears to have entered the child as nourishment, it having seemed to pass away in a state of putrid fermentation, while the body has been preying on its own tissues. It is in circumstances such as these that the beneficial effects of the muriate of calcium can be appreciated. If a child is brought to me with the symptoms that have just been enumerated, or if any symptoms indicating a want of assimilating power are observed, I immediately insist on the medicine being administered and continued for several weeks. Its powers in arresting such symptoms, in my opinion, are superior to cod-liver oil or iron; and, what is of no little advantage, very young children soon get to take it quite readily. Of course, when one is prescribing in disease of this kind, it is absolutely necessary to observe strict dietetic rules. In addition to the internal remedies, it will be of immense service if the abdomen of the patient is gently rubbed, night and morning, with olive oil, and afterwards a flannel bandage applied. With reference to diet, I insist upon a large quantity of milk, and the avoidance of starchy food and sweets.

The history of one or two cases may perhaps be of service as evidence of what has just been said.

J. F——, three years of age, was a most miserable-looking object when he came under my observation about four years ago. His legs and arms were most attenuated, and the abdomen was distended to an extraordinary degree; moreover symptoms of ulceration were present at the umbilicus. This gradually increased till, in a very short time, a false anus became established at this point, from which passed the most fetid and offensive of stools. To such an extent did the evacuations exude from this opening that very little passed through the rectum. An area extending for several inches round the umbilical orifice was excoriated by the acridity of the discharges. This was counteracted by the application of charcoal poultices, and other antiseptic applications. In consequence of the emaciated and exhausted condition of the patient, the slightest movement caused him intense pain. In spite of all these untoward symptoms, the muriate of calcium worked a cure, for in fifteen months the fistulous opening healed, the child gained in weight and strength, and now he is a strong and apparently healthy boy, not presenting at this time any appearance outwardly of having been in such a precarious state of health three years and a half ago.

Another example of the curative effects of this salt in the wasting diseases of children will suffice, and this time I will relate the history of three children of one family who were considered to be in a dying condition from tabes mesenterica. Two children of the same family had, previous to my having been called to attend, been cut off by the same disorder. The three children—all boys—to whom I refer, had all the symptoms of tuberculosis, and appeared to be literally dying on their feet. Their ages varied from three to eight years. Within seven months of the commencement of the treatment by muriate of calcium, combined with a judicious diet, the children were plump and healthy-looking. The abdomen in each individual was reduced to a normal size, the stools had become healthy in appearance and quantity, and had lost their offensive stench. In short, the children were cured. It is now eighteen months since they passed from under my care, and I believe they are still enjoying most excellent health.

Before passing from this part of my paper, I think it would be remiss in me were I to omit mentioning the effect of the muriate upon the children of the Cambridge-street Orphanage for Girls, of which institution I have the medical charge. The majority of these children are in a most pitiable condition when admitted, and in more than half the cases signs of tubercular disease are very apparent. The muriate of lime has been here put to a crucial test, but it has shown itself to be worthy of the trust reposed in it, for in none of the cases has it proved of no benefit. All the children to whom it has been administered have improved under its use, and the majority of those affected appear to have shaken themselves clear of the disease altogether. These facts appear doubtless very extraordinary, and so they are, but if anyone would like to prove the matter for himself let him visit the Orphanage, which is always open to visitors, and the matron will gladly show the patients who have been under treatment.

In the tubercular diseases of bones and joints of children the beneficial effects of the muriate of calcium are very marked. I could recount numerous instances of cure effected by this means, but will content myself by mentioning one. A lad about thirteen years of age was brought under my notice some two years ago. At that time there were eight running sores in different parts of his body, each having connexion with diseased bone. A rib was affected, the bones of the forearm, and the metatarsal bones. He was in a most emaciated condition, but under the muriate of lime treatment he rapidly gained flesh. He took the medicine for fifteen months, at the expiration of which time the lad was perfectly well.

In tubercular disease of the cervical glands I know of no remedy which can equal it. Numberless instances of tuberculous cervical glands yielding to its power have passed under my eye, and, indeed, it is in these affections the muriate of calcium most unmistakably displays its therapeutic properties. A single case may be sufficient to show how it acts in such circumstances. A young man came under my care about eighteen months ago. His condition was as follows:—A running sore proceeded from each parotid and the submaxillary glands, and there was enlargement of some of the cervical glands. His left testicle was also very much hypertrophied, and it was the seat of an abscess. I should add that all these abscesses had been discharging for a period of several months. He was ordered twenty grains of muriate of calcium three times a day after meals, and in a few months the abscesses in the neck healed, the enlarged glands became reduced in size, the testicle also recovered, and the patient gained rapidly in weight; and now he is in the enjoyment of good health, though I still advise a continuance of the treatment.

I have treated several cases of phthisis pulmonalis by this means and with most gratifying results when the disease was got at in the early stage. In such cases I have had distinct cures—at least, the disease has been checked, emaciation has ceased, the cough has disappeared, and the patients have recovered their healthy appearance. In conjunction with the muriate I have used a spray containing one-fifteenth of a grain of arsenious acid to one drachm of water thrice a day, and I think with the effect of expediting the cure.

Before concluding, permit me to add that the only case of tubercular peritonitis that has come under my notice during the past four years has yielded completely to this remedy.

It will be seen from the cases that I have cited that the medicine requires to be perseveringly used. Let me urge on my professional brethren to give it a lengthened trial, and not to be discouraged by an apparent failure. Muriate of calcium can do no possible injury to the economy, while in properly selected cases it will be of incalculable service.

ALOPECIA IN CONGENITAL SYPHILIS.

BY THOMAS BARLOW, M.D., B.Sc.,

ASSISTANT-PHYSICIAN TO THE LONDON HOSPITAL AND TO THE CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.

ALOPECIA in acquired syphilis is common enough, but I have been unable to find any reference in books to loss of hair as a sign of the congenital form of the disease. The first case in which I observed this condition was that of a child who at six weeks old had extensive skin and other lesions caused by congenital syphilis. Amongst other results he had considerable desquamation about the forehead and scalp. When this had cleared off his eyebrows became all but bare, and his scalp extensively so. Although his general improvement under mercurial treatment was rapid and complete, yet, even at eleven months, when he was brought for inspection, half his scalp was bare and shiny, and his eyebrows were still thin.

Since noticing the above I have seen several syphilitic children in whom alopecia has occurred, but to a much less extent. In some of them all that one could say was, that in a given patch the hair was very much thinned; in others the loss of hair has been as marked as in alopecia areata.

What the natural history of alopecia in acquired syphilis is I cannot say, but in the congenital form many of the cases which I have seen have, like the first mentioned, been preceded by desquamation of the scalp in the region which has subsequently become bare. In some I have failed to ascertain that there had been desquamation. It has often been very slight.

As to the position, I believe the eyebrows are the most conclusive spots. If in a child from two to three months old one or both eyebrows be bare, it ought always to raise the suspicion of congenital syphilis. The occipital region has, in some cases, been affected, and with it there has been a moderate enlargement of the occipital glands. A more characteristic situation is the junction of the frontal with the temporal regions.

There are two provisoes to be borne in mind—first, that in rickety children, with much head sweating and muscular weakness, the occiput very often becomes almost bared of hair; and, second, that in a young baby the wavy anterior margin of the hairy scalp presents a bay where the hair is deficient in each fronto-temporal region. Unless, therefore, the alopecia is very marked on one side, or extends (as I

have seen it do) from the fronto-temporal region right back to the vertex, it is hardly characteristic.

Though so slight and apparently trivial a lesion, the effects of it may remain for several months, as was illustrated in the first case. Another example may be given. A child, fourteen months old, was brought to the out-patient room at Charing-cross Hospital for diarrhœa. There was a half-bared patch in one fronto-temporal region, and the slightest possible depression of the root of the nose. On inquiring as to his health when a baby, I recalled distinctly having treated him for well-marked congenital syphilis twelve months before. I cannot pretend that in a disease which has such a transparent and obvious "facies" as congenital syphilis this sign is of much diagnostic value, but in a doubtful case it may be suggestive or confirmatory, as in the following:—

A child five weeks old was brought to Great Ormond-street with intertrigo, which absolutely had nothing "specific" about it. In a fortnight there was extremely slight nasal catarrh, and the slightest possible squamous rash on the forehead, which afterwards extended along the right fronto-temporal region, but lasted only a few days. When I saw the nasal catarrh and slight desquamation, I rather precipitately ordered some grey powder. No fresh signs appeared, and in a fortnight I left off the medicine to see whether the disease would manifest itself more definitely. Slight "snuffles" recurred, and there was a little enlargement of the spleen to be made out. These signs soon disappeared after going back to the grey powder, but for quite a month after there was a bare patch in the right fronto-temporal region. I could not gain any history of syphilitic manifestation in the mother; but this is very often the case (*vide* Mr. Hutchinson's address on Colles's Law). The father, however, has had a genital sore, and has now some obstinate flattened tubercles on the forearm and arm, which I believe to be of the nature of gummata.

In one or two cases I have examined under the microscope the scanty hairs in these half-bared patches, but have learnt nothing therefrom. It is hardly necessary to say that there were no spores to be seen.

Montague-street, Russell-square.

POST-PARTUM HÆMORRHAGE AND ITS TREATMENT.

BY JAMES BRISBANE, M.D.

I HAD lately the extreme mortification to lose a patient from post-partum hæmorrhage. It was her seventh confinement, in three of which I attended her, and all were rapid and natural, and the subsequent recoveries excellent. On this occasion I was called at five in the morning. At half-past five the child was born, and by half-past six I was home again, having left my patient a corpse. This was so rapid and so opposed to all my previous experience, that it has made a strong impression on me, and has induced me to record it, as I think there is sometimes more to be learned from an unsuccessful case than a successful one.

Shortly after the birth of the child the placenta passed, and the uterus contracted well. I applied the binder, and examined the pulse, which was normal. A few minutes afterwards, when I had just finished washing my hands, the patient remarked that the discharge was rather free. I found that the uterus had relaxed, and a copious hæmorrhage had set in. I at once compressed the uterus externally, applied napkins dipped in cold vinegar and water, and administered a full dose of ergot. These, however, having no effect in restraining the flooding, I introduced my hand into the uterus, which immediately contracted, and the discharge ceased. Shortly, however, it again relaxed, and the blood rushed out more violently than before. I now tried the cold douche, which utterly failed. Again I introduced my hand, and despatched a messenger for ice. As, however, it was during the night, a considerable time elapsed before it could be obtained. I kept my hand within the uterus, and compressed the bleeding surfaces as well as I could with the back of my hand, while with the other hand I kept up firm pressure externally. The uterus refused to contract, though by these means I kept the flooding somewhat in check till I obtained the ice. I placed one lump of ice in the vagina, and another externally, and for a time I thought it would have proved effectual. The good effects, however, were only transient, as the hæmorrhage in a short time returned as bad as before. Unfortunately I had no perchloride of iron with me, and, as considerable delay took place before I could get it, my patient had sunk before the messenger returned. Here is an all-important question: If I had had the perchloride of iron at hand, would it have saved my patient? This is one of those questions that can never be answered, though I have a strong impression that it would.

About four years ago I had in close succession two very bad cases of flooding, which yielded, after all other means had failed, to perchloride of iron by the "ready method," as described by Dr. Wynn Williams, and of which I shall have more to say presently. For a couple of years or so after this I made a point of carrying a bottle of perchloride of iron to every case with me. But when a long series of cases—100 or more—are attended without a single mishap, a feeling of security is thus engendered, and one does not go to every case prepared for all emergencies. It was so in this case, and I can now only lament the loss of my patient. I have attended in all upwards of 1800 confinements. These include four cases of placenta prævia, several cases of accidental and numerous cases of post-partum hæmorrhage, and the above is the first case I have lost. In the slighter cases I have found the application of cold and the administration of ergot suffice to stop the flooding. In more severe cases the introduction of the hand will often succeed. Dr. Hamilton, of Falkirk, about twelve years ago, suggested a method of restraining post-partum hæmorrhage by introducing one hand into the vagina and passing the fingers behind the uterus into the sulcus between the vagina and uterus. Compression is thus made from behind internally, while with the other hand compression is kept up externally. The uterus is thus held between the two hands. But in a short time the hand internally becomes so tired that it is impossible to keep up pressure for any length of time. Nor have I found this a very successful mode of keeping the flooding in check. A more effectual mode is that suggested by Dr. Gooch—viz., to introduce the hand entirely within the uterus. The stimulus of the hand will often cause it to contract; and, even if this does not occur, the bleeding can be more effectually controlled by pressing the back of the hand against the placental surface of the uterus. I am sure that but for the adoption of this method my patient would have sunk in one-half the time. A turpentine enema I found effectual in two severe cases.

The application of ice externally, and the introduction of a lump into the vagina, I have not found to fail in more than four cases. In these four cases the perchloride of iron was at once successful in arresting the flow. As the use of perchloride of iron in post-partum hæmorrhage may still, to some extent, be regarded as *sub judice*, every case bearing on the point must be looked on as interesting. My experience extends to four cases, and in all it acted like a charm. It is a most simple and efficient mode of treatment. Nothing more is required than to carry a two-ounce bottle of ordinary tincture of the muriate of iron. A piece of sponge can always be obtained. This is compressed in the palm of the hand and the iron poured on it, and thus it is conveyed up to the bleeding surface of the uterus, against which it is pressed and left *in situ*. The blood coagulates, the uterus contracts, and the patient is rescued from the most imminent danger. I have at my next visit always found the sponge in the vagina, nor have I ever seen any bad effects follow. This mode of using the iron appears to me to fulfil the *cito et tuto* indications much more than Dr. Barnes's method of injection. No time is lost in preparing the fluid and getting the injection apparatus in readiness; and, further, those objections of producing thrombosis, injecting air, &c., are obviated.

All writers on post-partum hæmorrhage make mention of the rapidity of the pulse after delivery as being a symptom of grave import, as indicative of hæmorrhage. But there are other conditions of the pulse which I have not seen adverted to by anyone—viz.: 1st, irregularity; 2nd, unusual slowness. Mere rapidity of the pulse may be, and often is, present after delivery from other causes than hæmorrhage—from exhaustion, &c. But I have never seen

this irregularity of pulse, now beating at from 80 to 90, then suddenly mounting up to 120 or 130, then suddenly falling again to 90 or 100—I have never observed this condition except where flooding was present. I have therefore learned to attach far greater importance to irregularity than to mere rapidity of the pulse. Again, one of the worst cases I ever had was where the pulse, from beating at its normal standard, 80, suddenly fell to 50. This I have observed only in one case. In one or two cases the pulse was distinctly intermittent. The common injunction given in books on midwifery is not to leave a patient when the pulse is above 100. But I have often done so, provided it is beating steadily; whereas a rapid and irregular pulse would have caused grave anxiety and solicitude.

Another interesting question in regard to post-partum hæmorrhage is the relative frequency with which it is met by different practitioners. Dr. Playfair, in his recent work on Midwifery, says on this point: "When I hear that a medical man is constantly meeting with severe post-partum hæmorrhage, I hold myself justified, *ipso facto*, in inferring that he does not know, or does not practise, the proper mode of managing the third stage of labour." Now the method of "expression" of the placenta described by Dr. Playfair is substantially the same as I have always practised, and yet I have met with a large proportion—upwards of thirty cases—of post-partum hæmorrhage. Conversely, a friend of mine who has attended upwards of a thousand confinements, has never met with a case of flooding of any kind whatever; and on comparing notes with him, I find that he, for the most part, practises the very mode that Dr. Playfair says ought not to be practised. I suspect that there is an element of luck in regard to the meeting with hæmorrhage, as there is in regard to puerperal fever; for it is a fact that many practitioners conduct large practices for years without ever meeting with a case of the kind, while others, without any assignable cause, are constantly meeting with them.

Park-road, Regent's-park.

FUNGUS HÆMATODES OF LEG, TREATED WITH CHROMIC ACID; CURE.

BY A. E. BARRETT, M.R.C.S. &c.

MATTHEW S——, aged fifty-two, farm labourer, a somewhat cachectic-looking man, applied to me on the 21st of March, 1876. He states that he has never had syphilis, and that none of his relatives have had malignant disease. Twelve years ago he slipped from the wheel of an engine, and scraped off the skin over the middle of the left tibia. He continued at work, and took his beer freely. The sore became inflamed, and he had to lay up for six weeks. Before it was quite healed he resumed work; the wound reopened, and emitted a sanious discharge. After again resting, it cicatrised; but a hard, dark-coloured, movable lump remained at the injured spot. This continued, without causing much inconvenience, until five months ago, when it was evidently increasing. A month since he knocked it against a barrow; and the following day, as it was swollen and painful, he came to me, and I enjoined rest in a raised posture, thinking that the swelling might be connected with a varicose state of the veins. As rest did not reduce it, but as it appeared to be bulging in the centre, I passed needles under it and applied a ligature; but after separation the growth recurred, and assumed all the characters of fungus hæmatodes.

Dr. Lowe, consulting surgeon of the West Norfolk and Lynn Hospital, kindly examined the case for me at this time, and recommended the application of crystallised chromic acid. The following is his description of the case. "The fungation was prominent; about an inch in diameter, dark-coloured, and at times bleeding freely. The surrounding skin was indurated and dark, with venous congestion. Occasional sharp pains were felt, but generally there was a dull aching in the limb."

On the 5th June chromic acid was applied in the following manner:—A ring of gutta percha, having been fitted round the sore and sealed to the skin with cerate, was filled with crystals of chromic acid, which were allowed to deliquesce and remain in contact with the tissues for fifteen minutes. As this did not quite suffice to destroy all the growth, a second application was made fourteen days afterwards. In a fortnight the dry, leathery eschar, which always results from the application of chromic acid, separated; healthy granulations commenced, and the sore rapidly and firmly cicatrised. It remains sound at the present time, the surrounding induration having quite disappeared.

King's Lynn.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

BULLET WOUND OF CHEST; HÆMOTHORAX; ABSCESS OF LUNG; RECOVERY.

(Under the care of Mr. HERBERT W. PAGE.)

THE following history, condensed from notes taken chiefly by Mr. Coumbe, house-surgeon, is of interest, not only as a record of a case unusual in this country, but also as showing how a lung may recover from conditions perilous to life. The absence of hæmoptysis is no evidence of the lung itself not having been wounded. The experience of surgeons during the American civil war is decisive on this point; and in the first volume of the Medical and Surgical History of the Rebellion it is stated as "quite erroneous to suppose that hæmoptysis is a usual sign of wound of lung, its appearance being noted in only 492 of the 8715 cases observed." The successful issue of the present case is perhaps due as much to the previous good health of the patient as to the treatment carried out, which consisted, in the main, in ensuring rest, and the internal administration of what are usually termed expectorants and tonics.

J. C——, brought to the hospital on the morning of Nov. 9th, 1876, had been shot at a few minutes before, by one of his mates, with a revolver, at a distance of about six yards. At the third shot he fell to the ground. On admission, at 5.15 A.M., there was marked collapse, and a small wound corresponding with a hole in his clothes was found about three-quarters of an inch to the inner side of the right nipple, just below the inferior border of the fourth rib. The wound, from which a small piece of coat was taken, just admitted the tip of the little finger, and a probe passed into it to the depth of about an inch indicated its direction as perpendicular to the surface. There was no hæmorrhage externally and no hæmoptysis, nor could any trace of the bullet be found, though it was clear that it had penetrated and was lodged in the interior. Three hours after admission the collapse was even more pronounced, and led to the belief that bleeding was going on internally. His temperature at midday was 97° F. He rallied during the day, and on the following morning his temperature was 100° F., his pulse 112, and his respiration 50. The physical signs were now definitely marked. Absolute dulness with absence of breath-sounds over the posterior inferior part of the right chest, commencing two inches above the inferior angle of the scapula, comparative dulness anteriorly, and increased breath-sounds over the upper part of the lung, pointing to compression of the base of the lung by fluid in the pleural cavity. This was no doubt blood. During the next few days he suffered much from difficulty of breathing and from troublesome cough, and the temperature on the morning of the 12th was 103·4° F. On Nov. 16th it was again normal, and he was in many respects improved, though he had a good deal of pain about the upper border of the liver, and was jaundiced. This lasted for several days, and as the temperature again rose and continued between 101° and 103° F., fear was felt that the bullet might

be setting up some inflammation about the diaphragmatic pleura, or pneumonia at the base of the lung. The symptoms, however, subsided, the breath-sounds were somewhat less inaudible, and the posterior dulness was not quite so high. On Nov. 25th and 26th, and again on the 30th, he had severe rigors. On Dec. 6th he was seen by Dr. Broadbent, whose opinion was asked as to the advisability of aspirating the chest. It was agreed not to interfere, for although fluid was undoubtedly present in considerable quantity in the pleural cavity, there was evidence pointing to consolidation in the lowest lobe of the lung. From this date he gradually improved; temperature, pulse, and respiration fell, the dulness diminished, the breath-sounds became more audible, and he was allowed to sit up.

On Jan. 16th, 1877, he had slight shivering and sickness, and from this date up to March 1st he was again confined to bed. The temperature was very irregular and "forked," varying from 99° to 104°; pulse and respiration were frequent. He had constant sweats, and at the same time profuse, purulent, and occasionally offensive sputa, which came up with greater freedom, and almost without effort, whenever he lay on his right side. He ate well throughout, and did not materially lose flesh. From March 1st the cough and expectoration lessened, and from the 10th to the date of his discharge on April 14th the temperature remained normal. There was then no shortness of breath on extra exertion, and he felt perfectly well, the noticeable points about the right chest being some flattening anteriorly, diminished expansion, slight dulness on percussion at the base, and comparative feebleness of breath-sounds. On August 1st the state of the chest had still further improved, the flattening and impaired expansion having completely disappeared. He has been in good health since he left the hospital, and it is to be hoped that the encysted bullet will not of necessity be a source of future danger.

NORFOLK AND NORWICH HOSPITAL.

CASE OF PNEUMOTHORAX TREATED BY PARACENTESIS THORACIS, WITH IMMEDIATE RELIEF TO THE URGENT SYMPTOMS, AND APPARENT CHECK TO THE PROGRESS OF THE PHTHISICAL DISEASE.

(Under the care of Dr. EADE.)

THIS case is specially interesting in connexion with the recent discussion at Manchester on the treatment of pleuritic effusions.

E. L——, aged sixteen, admitted April 15th, 1876, for symptoms of chronic phthisis. On the evening of this day he was seized with pain in the left side and difficulty of breathing, and on examination there was found to be some distension of the left side of the chest, and increased resonance on percussion, most marked about its posterior middle third. There was also audible distinct amphoric resonance, and metallic tinkling. These signs were considered to indicate a rupture of the lung, and escape of air into the left pleural sac, but as they produced no severe symptoms, no active treatment was adopted.

On May 1st, however, fifteen days after the seizure, the lad became severely ill, and greatly distressed for breath. His countenance became livid; he was unable to lie down in bed; the respiration was 44, and the pulse 130 in the minute, and the temperature was 101° Fahr. The left side of the chest was now markedly distended and almost motionless. It was extremely resonant on percussion; only a little respiratory murmur could be heard—chiefly at the back of the chest, but varying with the position of the patient,—and with it was heard a most marked metallic tinkling. The heart was greatly displaced; its apex beat under the *right* nipple, and no pulsation could be felt in the præcordial region.

As he appeared to be almost dying of apnœa, it was decided to let out some of the air from the chest, and a trocar having been introduced (by Mr. Williams) between the fourth and fifth left ribs in front, a considerable quantity of air rushed out with sufficient force to blow out a candle held near the opening. After this followed about a pint of thin, clear, greenish-looking fluid. The heart immediately returned as far to the left as the right edge of the sternum. He felt some pain as it recovered itself, but he quickly became greatly better, and the distress of breathing was at once and markedly relieved. After the trocar was withdrawn, it was found that the region of the left pectoral muscle was emphysematous, and crackled under the finger (a condition which, it may be mentioned, continued for a week or two without causing any inconvenience, and then gradually disappeared).

No bad symptom followed the operation, but some air quickly returned into the pleural sac and redistended it, though never so as to cause the same distress as before. On the contrary, from that time he gradually improved in condition; and two months afterwards it was reported that his breath, though short, was not extremely so; that there was but little cough or expectoration; that though very pale and thin, he was gaining a little both in flesh and appetite; that some localised moist sounds originally heard at the right apex had almost disappeared; and that he was again beginning to go out into the hospital grounds.

In due time he was discharged and sent home, the left chest being still distended with air and some fluid, and the apex of the heart still beating between the right edge of the sternum and the right nipple.

In June last—more than a year after the rupture of the lung and the subsequent evacuation of the air—this patient was not only living, but had increased in weight and stature, and, though very pale and delicate-looking, was evidently in much improved health. His breath was necessarily short, but the progress of the phthisical disease appeared to be stayed. The left side of the chest was still much distended, evidently with a considerable quantity of fluid, and the heart still beat much to the right of the sternum; but he had scarcely either cough or expectoration, and there was no distinct physical sign of disease in the right lung.

Remarks.—This case well illustrates the advantages to be derived from puncture of the chest in cases of pneumothorax, where the accumulation of air in the pleural cavity is excessive, causing immediate and urgent danger to life from pressure upon the heart and lungs. This patient at the time of the operation was unquestionably dying from apnœa, and he was at once relieved of his most urgent symptoms. The operation itself was most trivial in its nature, and quite harmless in its effects. It further illustrates an effect which has been occasionally noted as following upon rupture of the tubercular lung, and the subsequent exercise of pressure upon the pulmonary tissue—namely, the more or less permanent arrest of the progress of the phthisical disease. After more than a year, although the heart still beats to the right of the sternum, and though the left lung is almost useless for respiratory purposes, yet the patient is not only alive, but is actually growing and improving in appearance, is able to walk about, and to a considerable extent enjoy life, and chiefly complains of shortness of breath. The propriety of evacuating the contents of the left pleura has of course been considered, but, looking to his comparatively favourable condition, and to the possibility of rekindling active disease by any operative procedure and the removal of the pressure, it has, up to the present time, been decided not to interfere.

HOSPITAL FOR WOMEN AND CHILDREN, CORK.

DISEASE OF TARSUS; SYME'S AMPUTATION; RECURRENCE IN TIBIA; TEALE'S AMPUTATION.

(Under the care of Dr. MACNAUGHTON JONES.)

IT is a noteworthy circumstance that in the first of the subjoined cases good reparative action took place in the soft tissues after amputation, while disease was advancing in the adjacent bones so as to necessitate a fresh amputation higher up the limb.

Miss G——, aged twenty-three years, a delicate strumous girl, with catarrhal symptoms in both lungs, and having remains of old strumous cicatrices on face and neck, was first seen in consultation with Dr. Cummins in 1874. She then had disease of the tarsus of the left foot. Syme's amputation was advised, as the foot had been for a considerable time useless, the only bone that was not implicated being the os calcis. The friends would not consent, and her own medical adviser was against the operation. She was seen again in May, 1876. The anterior surface of the os calcis and the astragalus were then con-

siderably diseased. Several cloacæ existed, and the integument was much involved. Her general health was fair, and the lung complications, which were active when she was first seen, had not increased. It was now doubtful whether Syme's amputation should be performed, for these reasons: the disease had advanced too far, the skin was greatly involved, and there was a chance of recurrence of the disease in the malleoli. It was, however, decided in consultation with the whole surgical staff to try this operation, which was accordingly done strictly antiseptically, according to Professor Lister's method. Most of the vessels were twisted, and two were tied with carbolised gut ligatures. Recovery was perfect and complete. Union took place by first intention throughout the entire wound, which in six days was almost completely healed. It was always dressed under carbolic spray. From the second day the pulse was normal. The temperature never rose above 99°. A slight weeping occasionally appeared from some of the old openings in the skin. About the fifth week after operation the scars in the skin, the marks of the old openings, showed signs of irritation, and gradually became inflamed, discharge every now and then issuing from some of them.

The practical and important sequel of the case may be told in a few words. The patient was removed to a convalescent home, where she had every care and constant attention, but in spite of this the disease returned in the stump. On the 14th of December amputation by Teale's method was determined upon. This was accordingly done antiseptically. She made a speedy and perfect recovery. Her general health and all the lung symptoms improved after the first operation, and she in no respect suffered from the second.

SYME'S AMPUTATION FOR DISEASE OF TARSUS; MALLEOLI FOUND TO BE INVOLVED; CARDEN'S AMPUTATION; RECOVERY.

Miss S——, aged fifty, wretchedly emaciated and debilitated from disease of entire tarsus, was admitted on December 11th, 1876. In consultation, it was considered a fair case to give the patient the benefit of Syme's amputation. The integument of the heel was healthy, and there was no evidence of disease of the malleoli. Accordingly the usual Syme's operation was performed under the antiseptic spray on December 20th. The os calcis was diseased, and adherent to the integument of the heel. The articular surface of the astragalus was healthy. The malleolar ends of the tibia and fibula were softened and carious. It was therefore resolved to perform Carden's operation in the middle third of the leg. This was at once done under the spray. The posterior tibial artery was the only vessel ligatured, and for this carbolised gut was employed; all the other vessels were twisted. The recovery was not quite so good or rapid as in the preceding case. This may have been attributable to a low state of health in a wretchedly bad subject and to the shock of the double operation. Unfortunately, too, the hospital spray apparatus got out of order, and for some few days the dressings perhaps were not so perfectly antiseptic as they might have been. The surface of the stump for some days appeared unhealthy, and a slight slough took place from the anterior flap. At length she progressed most favourably, and the stump healed. The antiseptic dressings were maintained throughout.

Reviews and Notices of Books.

The Different Forms of Flowers on Plants of the same Species. By CHARLES DARWIN, M.A., F.R.S. London: John MURRAY. 1877.

IN this volume Mr. Darwin puts together a large number of observations that he has made, as incidentally appears, in the course of many years, upon the differently formed flowers normally produced by certain kinds of plants, either on the same stock or on distinct stocks. He accepts the primary divisions, made by Linnæus, of hermaphrodite, monœcious, diœcious, and polygamous species. Amongst the different forms of flowers that occur in hermaphrodite plants are, first, those in which the pistils and stamens differ in length in two or three sets of individuals, accompanied by a difference in the size of the pollen-grains or in the state of the stigma. Such flowers, adopting the name given to them by Hildebrand, the author terms "heterostyled." They are found in fourteen natural families. A second set consist of hermaphrodite plants bearing two kinds of flowers: the one perfect and fully expanded; the other minute, completely closed, with the petals rudimentary, often with some of the anthers aborted, and the remaining ones, together with the stigmas, much reduced in size, yet with flowers that are perfectly fertile. Such flowers he terms "cleistogamic." A third set present conspicuous flowers adapted for cross-fertilisation by the aid of insects, and smaller and less conspicuous flowers adapted for self-fertilisation. Mr. Darwin notices, but does not enter into any minute details in regard to, the remarkable differences that exist between the ray and circumferential florets of various Compositæ and Umbelliferæ. He next proceeds to consider the monœcious plants, with their arrangements for securing cross-fertilisation by the early maturation of the anthers in some—proterandrous,—and in others of the stigma—protogynous. Whilst there are others, again, including those of the diœcious species, in which it appears that the differentiation of the sexes has affected the whole plant to such an extent that Mr. Bentham and Prof. Oliver have often, amongst the Restiaceæ of Australia and the Cape of Good Hope, found it impossible to match the male and female specimens of the same species. The last class considered consists of the plants called polygamous by Linnæus, which Mr. Darwin shows are subdivisible into several groups, according to the combinations of the sexes; and he instances an observation he made on some ashes growing in the same field, of which some produced exclusively female flowers, others exclusively male flowers, whilst others were hermaphrodite, some of which last developed numerous seeds, whilst others were barren. Further investigation showed that there are plants which bear on the same plant both hermaphrodite and female flowers, and for these he proposes the name of "gynomonœcious," the Atriplex being an example. There are others, like the common thyme, that are gynodiœcious. In the same way, some species of galmin are andromonœcious; but it seems to be doubtful whether there are any androdiœcious plants.

The first special case taken by Mr. Darwin is that of the cowslip, of which he states that even village children are aware that there are two forms, the long-styled and the short-styled. Other differences are found to be correlated with the length of the style of the pistil. Thus, the long-styled plants have not only a much longer pistil than the short-styled, but have also a globular and much rougher stigma, standing high above the anthers. The stamens are short, the grains of pollen smaller and oblong in shape. The upper half of the tube of the corolla is more expanded; the number of seeds produced is smaller and the ovules larger. The plants tend to flower earlier than the short-styled specimens. Experiments made showed that the best results in the production of seed were obtained when pollen from the long filamented anthers was applied to the long-styled pistil, or when the short-styled pistil was fertilised by the long filamental anthers, whilst the fertilisation of the short pistil with the long stamen, or of the long pistil with the short stamen, resulted in complete fertility. Similar phenomena are presented by other species of the Primulaceæ, and it may be remarked that the Primulaceæ generally have produced a large number of hybrid forms; the oxlip, for example, being a hybrid between the cowslip and the primrose, which are both good and true species. Mr. Darwin enumerates the following points, as being those by which

the hybrid origin of a plant in a state of nature can be recognised: first by its occurrence only where both its presumed parent species exist, or have recently existed; secondly, the supposed hybrid plant being nearly intermediate in character between the two parent species, and especially by its resembling hybrids artificially made between the same two species; thirdly, by the supposed hybrids being more or less sterile when crossed *inter se*; and, lastly, by the supposed hybrids being much more fertile when crossed with either pure parent species than when crossed *inter se*, but still not so fully fertile as the parent species. The remarkable arrangements by which the flowers of the heterostyled dimorphic plant, Linum perenne, are constructed to facilitate fertilisation are next described, and Mr. Darwin takes occasion to point out the special adaptations that favour fertilisation by the wind instead of by insects, though the two agents are often mentioned together as equivalent in their action. "We see adaptation to the wind," he says, "in the incoherence of the pollen, in the inordinate quantity produced (as in the Coniferæ, spinach, &c.), in the dangling anthers, well filled to shake out the pollen, in the absence or small size of the perianth, in the protrusion of the stigmas at the period of fertilisation, in the flowers being produced before they are hidden by the leaves, and in the stigmas being downy or plumose (as in the Gramineæ, docks, &c.), so as to secure the chance-blown grains. In plants which are fertilised by the wind the flowers do not secrete nectar; their pollen is too incoherent to be easily collected by insects; they have not bright-coloured corollas to serve as guides; and thus are not, as far as I have seen, visited by insects."

Other heterostyled dimorphic plants, the forms of the flowers of which are carefully described, and in many instances illustrated, by Mr. Darwin, are Pulmonaria officinalis and angustifolia, Polygonum fagopyrum, Mitchella repens, Borreria, and Faramea; and there are many mentioned less fully. The most remarkable peculiarities are, however, presented by certain members of the Lythraceæ, Oxalidaceæ, and Pontederiaceæ. In Lythrum salicaria there are no less than three different forms of females or female organs, and three sets of male organs, all as distinct from one another as if they belonged to different species. "Two of the three hermaphrodites must coexist, and pollen must be carried by insects reciprocally from one to the other, in order that either of the two should be fully fertile; but unless all these forms coxist, two sets of stamens will be wasted, and the organanisation of the species as a whole will be incomplete. On the other hand, when all three hermaphrodites coexist, and pollen is carried from one to the other, the scheme is perfect; there is no waste of pollen and no false coaptation. In short, nature has ordained a most complex marriage arrangement — namely, a triple union between three hermaphrodites, each hermaphrodite being in its female organ quite distinct from the other two hermaphrodites, and partially distinct in its male organs, and each furnished with two sets of males." Very carefully-made drawings and details of observations made on specimens of the purple loosestrife follow.

It will be seen from the nature of this work that it is scarcely open to criticism, except such as may result from the repetition and modification of the experiments and observations made and detailed. We can only say that the results Mr. Darwin has obtained are, in many points of view, perfectly novel, and they are placed before the reader in a very attractive form. The present volume yields to none of its predecessors in the interest it will excite, not only amongst botanists, but amongst all those who are engaged in biological studies.

OUR LIBRARY TABLE.

Principles of Theoretical Chemistry, with Special Reference to the Constitution of Chemical Compounds. By IRA REMSEN, M.D., Ph.D., Professor of Chemistry in the Johns Hopkins University. London: Baillière. 1877.—This little manual belongs to the same class as Hofmann's "Modern Chemistry," Cooke's "New Chemistry," and Tilden's "Introduction to Chemical Philosophy." It is intended for students who have mastered the first elements of the science and who are therefore in a condition to understand the reasonings on which the structural formulæ of modern chemistry are based. Chemical formulæ assert and involve more both of fact and theory than is apparent, and students often attain great practical knowledge of the science, and even learn to use its formulæ with accuracy and facility, without understanding their true meaning or being able to distinguish the certain from the more or less probable in regard to them. Similar confusion prevails in the minds of many teachers, and it is only by careful study that it can be swept away. For such study, essential for exactness in scientific thought, Prof. Remsen's book supplies valuable material. It is uniformly clear and logical. The author seldom overstrains a theory, and in several cases, as, for instance, in his remarks on atomicity (p. 84, *et seq.*), points out difficulties which are too often overlooked. He has made many things easy of comprehension which are generally very difficult, and altogether his book will be a real treasure to earnest students.

The Bath Thermal Waters, Historical, Social, and Medical. By JOHN KENT SPENDER, M.D. Lond., Honorary Fellow and Fothergillian Gold Medalist of the Medical Society of London, Surgeon to the Mineral Water Hospital, Bath. *On the Sulphur Waters of Strathpeffer in the Highlands of Ross-shire.* By D. MANSON, M.A., M.D. Second Edition. London: J. and A. Churchill. 1877.—These works are, of course, intended to exalt the merits of the mineral springs of Bath and Strathpeffer, and thereby to tempt patients to visit them. It is a practice for which we have no great respect, though it is impossible wholly to condemn it. Dr. Spender's book is amusing, but flimsy and decidedly weak in point of science. From the analyses he quotes it appears that the Bath waters contain about 135 grains per gallon of solid matter, chiefly consisting of the sulphates, chlorides, and carbonates of calcium, magnesium, and sodium. There seems to be about half a grain of iron, and the equivalent of about seventeen grains of sulphate of magnesia, per gallon. Of the Strathpeffer springs several are sulphurous, one very strongly so, containing nearly nine grains of sulphur per gallon, partly in the free state and partly as sulphides of hydrogen, potassium, and sodium. There is also a mild chalybeate spring, said to contain about two and a half grains of ferrous carbonate per gallon.

The Art of Electro Metallurgy, including all known processes of Electro-deposition. By G. GORE, LL.D., F.R.S. London: Longmans, Green, and Co. 1877. — This is another of Messrs. Longman's "Text-books of Science." Every one hitherto has been good, and we are glad to perceive that the present is no exception. It would have been impossible to find anyone better qualified for its preparation than Mr. Gore, for, in addition to great practical experience on the subject, he is a thorough chemist, and is therefore able to explain all the processes he describes. The book is divided into an introductory historical sketch; a theoretical division, in which the general principles of electro-chemical action are explained; and a practical division, subdivided into a section on methods of electro-deposition, and another on technical details, such as the management of batteries and electro-magnetic engines,

lists of authorities, patents, &c. The methods given are exceedingly numerous, and are clearly and simply described. The whole book is, moreover, crowded with interesting scientific facts, many of them gained by the long and careful researches of the author.

Chemical Composition of Foods, Waters, Soils, Minerals, Manures, and Miscellaneous Substances. Compiled by E. T. KENSINGTON, F.C.S., formerly Chief Assistant to Thomas Anderson, M.D., late of the University of Glasgow. London: J. and A. Churchill. 1877.—This, as its name implies, is a very extensive and carefully-made collection of analyses of the most widely different substances, published without any comments. The range extends from emeralds to oysters, from guano to public-house sherry, and could, indeed, hardly have been wider. The book will be exceedingly useful, and it would have been invaluable if the author had named the sources from which his analyses were drawn. As it is, the reader will scarcely know which to trust and which to doubt.

The Industrial Classes and Industrial Statistics. By G. PHILLIPS BEVAN, F.G.S. Two Vols., with Maps. London: Edward Stanford. 1877.—These little volumes form a pendant to a series on the British manufacturing industries of which Mr. Bevan has been the editor. They are devoted mainly to the statistics of labour, the extent of the different branches of manufacture, the number of hands engaged in them, with their age, and the wages they earn. To us, however, the chief interest of the book consists in the careful consideration given throughout to the effect of the various industries on the health of the operatives. The importance of this study is only equalled by its difficulty, and we heartily commend to the notice of the medical profession the observations which Mr. Bevan has collected. In every respect the work before us is important, and it is not too much to say that it deserves the attention equally of the physician and the statesman.

THE BRITISH ASSOCIATION.

THE forty-seventh annual session of this Association was opened at Plymouth on the 15th instant, the first important business transacted being a meeting of the General Committee for the reception of the report of the council for the year 1876 7, and the treasurer's statement, from which latter document it appears that the receipts (including a balance of £964 from the previous year) had amounted to £4690, and the total expenditure to £2954, leaving a balance in hand of £1736. From the report it is gathered that the council for the present do not support a proposal of the committee of the late Glasgow meeting to urge upon the Government the establishment of a Permanent Museum of Scientific Instruments and Chemical Products. Respecting another matter which has been forced upon the attention of the council by certain proceedings in sections at recent meetings—namely, the possibility of extending unscientific or otherwise unsuitable papers and discussions, an alteration of rules will, for the future, insure a more strict control over the papers to be read.

In the unavoidable absence (through illness) of the President of the Association, Dr. T. Andrews, of Belfast, the chair at the evening meeting in the Guildhall was taken by the Mayor of Plymouth, who was supported by Lords Mount-Edgcumbe, Fortescue, and Houghton, in addition to many of the leading scientific members of the General Committee. The assemblage in the spacious hall was large, but not overflowing; probably the acoustic properties of the hall would have been improved by fuller occupation, but, as it was, some difficulty in following the very clear intonation of Professor Thomson was experienced by many of the audience.

Professor Allen Thomson's inaugural address occupied nearly an hour and a half in delivery; and (prefaced by an apology for its special rather than general character) was devoted to the one biological topic of the "Development of the Forms of Animal Life," discussed in a manner full of interest to all who were able to follow the scientific technicalities of the subject, though they were probably not a majority of the assembly. It is impossible here to attempt to give an analysis of this address; those who wish to study it in detail will find it very fully reported in *The Times* of the 16th inst. What it finally led up to will best be expressed in Professor Thomson's concluding words:—"I consider it impossible, therefore, for anyone to be a faithful student of embryology in the present state of science without at the same time becoming an evolutionist. There may still be many difficulties, some inconsistencies, and much to learn, and there may remain beyond much which we shall never know; but I cannot conceive any doctrine professing to bring the phenomena of embryonic development within a general law which is not, like the theory of Darwin, consistent with their fundamental identity, their endless variability, their subjugation to varying external influences and conditions, and with the possibility of the transmission of the vital conditions and properties, with all their variations, from individual to individual, and, in the long lapse of ages, from race to race. I regard it, therefore, as no exaggerated representation of the present state of our knowledge to say that the ontogenetic development of the individual in the higher animals repeats in its more general character, and in many of its specific phenomena, the phylogenetic development of the race. If we admit the progressive nature of the changes of development, their similarity in different groups, and their common characters in all animals, nay, even in some respects in both plants and animals, we can scarcely refuse to recognise the possibility of continuous derivation in the history of their origin; and however far we may be, by reason of the imperfection of our knowledge of palæontology, comparative anatomy, and embryology, from realising the precise nature of the chain of connexion by which the actual descent has taken place, still there can be little doubt remaining in the minds of any unprejudiced student of embryology that it is only by the employment of such an hypothesis as that of evolution that further investigation in these several departments will be promoted, so as to bring us to a fuller comprehension of the most general law which regulates the adaptation of structure to function in the universe."

On Thursday morning (the 16th inst.) the different sections met in the places allotted for the purpose, Sections E and F being the worst off in respect of locality, and the real work of the meeting was then commenced. In each section the proceedings were inaugurated with an address by its president, and as there were consequently nine of such addresses delivered—Section D being subdivided into three branches,—it will be obvious that the space which would be required to give any sort of idea of the topics touched upon by each speaker would far exceed what can be afforded in these columns. The sectional proceedings can, in fact, only be referred to in respect of such addresses or papers as seem likely to be of general interest to readers of THE LANCET.

In Section A ("Mathematical and Physical Science"), Sir William Thomson on Friday discoursed upon his old theme of "The possibility of life on a meteoric stone falling on the earth." His remarks drew from the veteran meteorologist, Mr. Glaisher, the observation that he saw no reason why life should not exist upon a meteoric stone, though, as a matter of fact, he never knew of organic matter of any kind having been found on such a body. Some experiments with the latest scientific toy, the Telephone, which were made in this section could hardly, by any straining of language be called scientific; the philosophers were at play, and not at work, over this.

In the Zoological Department of Section D ("Biology"), the president, Mr. J. Gwyn Jeffreys, F.R.S., chose for his address the subject of "The Deep-sea Mollusca," taking occasion at the close to express his dissent from the modern doctrines of evolution, which he regarded as "the product of human imagination," and against the acceptance of which he held that the imperfection of the geological record should be sufficient to warn thinkers.

In the Department of Anatomy and Physiology of Section D, Prof. A. Macalister, M.D., opened the proceedings with an address on Embryology, referring to the many important additions to the knowledge of the subject which had sprung from the researches of the past few years, and especially to two series of observations on the primitive groove and on the first appearance of the vertebrate limbs. Minute and careful study of the shark's egg had demonstrated first that the earliest traces of limbs are thickening of the epiblast, and secondly, that the limbs are the divided remains of a continuous lateral fin, while examination of the structure of the parts making up the limbs of vertebrates leads to the belief that each limb contains materials for more than one metamere, and thus it becomes an interesting subject for speculation as to why in vertebrate animals the number of limbs has never exceeded two pairs. This, Prof. Macalister holds, does not depend on any necessary morphological conditions, so there must be some mechanical reason as yet unascertained, some peculiar adaptations of a four-limbed form for varieties of motion and volition, &c., which make the quadruped superior to the biped or milliped. With regard to human anatomy, Prof. Macalister observed that each year's progress was making that study less and less a mere matter of words and names, but increasingly one of the practical applications of scientific morphological principles.

Of papers read in this Section, mention may be made of the following:—By Dr. D. J. Cunningham, "On the Anatomy of the Shoulder and Upper Arm of the Thylacine, Cuscus, and Phascogale"; by Mr. G. T Bettany, M.A., "On the Structure and Development of the Vertebrate Skull"; by the Rev. W. H. Dallinger, "Researches on the Life History of the Simplest Organisms"; by the Rev. Professor Haughton, F.R.S., "Transcendental Anatomy, or a Geometrical Investigation of the best possible number of Limbs for Terrestrial and Aquatic Animals"; by G. T. Bettany, M.A., "On the use of the terms Assimilation and Metastasis"; by D. F. Cunningham, M.D., "On the Mammillary and Accessory Processes as persistent Epiphyses in the Human Spine"; by Wm. H Pearse, M.D., "Geography of Consumption in Devonshire"; by Professor Rolleston, F.R.S., "On the Arterial Supply of various parts of the Brain"; by Dr. B. Howard, "On an Improvement in the Marshall Hall and Silvester methods of Artificial Respiration"; by William Thompson, F.R.S.E., F.C.S., "A Method of Excluding Germs from Rooms used for Surgical Operations"; by D. F. Cunningham, M.D., "On the Brachial Plexus of the Cuscus."

In the Department of Anthropology (a subdivision of Section D), Mr. Francis Galton's introductory address had reference to the study of groups of men of sufficiently similar mental characteristics or physiognomy to admit of classification, methods of pursuing the inquiry in a strictly scientific manner being pointed out so that from minute and careful observations of the character and physiognomy of well-marked varieties of men the anthropologist would be in a position to consider the life-history of those varieties, and especially their tendency to perpetuate themselves. An illustrative case cited was that of the infamous Jukes family in America, whose pedigree, carefully made out through seven generations, revealed that from one notorious criminal a stock was produced of upwards of 500 persons of a prevalent criminal type. Amongst the papers in this department was one by Mr. H. C. Sorby, "On the Colouring Matter of Human Hair"; and another by Professor Rolleston, "On the Rationale of Artificial Deformations of the Head."

Lord Fortescue's address, as president of Section F ("Economic Science and Statistics"), was lengthy and discursive, ranging over such topics as the misuse of statistics, theories of population—the noble lord's conclusions on this subject being strongly anti-Malthusian,—monopolies, and local administration. The "population and subsistence" question was treated in subsequent papers by Mr. S. Bourne and Dr. Farr; and, judging from the large attendance during the reading of these papers, and from the discussions which ensued, it is evident that recent legal proceedings in London have excited an unusual amount of interest in this question. Sir James Watson's paper on the means of improving the sanitary condition of large towns, as illustrated by the experience of Glasgow, was on all hands admitted to be a valuable exposition of the beneficent results of structural improvements wisely planned and judiciously and effectively carried out. Mr. F. J. Bramwell's paper on the "Water-supply of London," and the remarks which Dr. Littleton, the health officer for Plymouth, was invited by the Committee of the Section to offer on the "Health of Plymouth," were much appreciated.

In Section G ("Mechanical Science") some papers interesting in their relation to sanitary matters were read, among which may be noted two by Mr. Baldwin Latham on "Interception of Rainfall from Sewers" and on "Movements of Water in the Chalk Formations," and one by Mr. Bellamy on the "Plymouth Waterworks."

The proceedings of the Association seem to have gone on throughout with reasonable smoothness; the weather, except on one or two days, was favourable; excursions and *soirées* pleasantly relieved the serious business to be transacted; and it is hoped that the *savants*, by this time dispersed to their homes or elsewhere, will carry away with them agreeable memories of the Plymouth meeting.

Next year the Association will meet at Dublin, under the presidency of Mr. William Spottiswoode, F.R.S.

MORTALITY AT SEA.

THE annual reports of the Registrar-General are now supplemented in an important way by a record of deaths that occur at sea, compiled from the Marine Register Book. "Before the Registration Act of 1874 came into operation the law relating to the registration of births and deaths of English subjects at sea was virtually inoperative," but by this Act commanders of British ships not in the royal service are compelled, under a penalty, to transmit the returns of all births and deaths occurring on board to the Registrar-General of Seamen, who sends a certified copy thereof to the Registrar-General. Commanding officers of her Majesty's ships send similar returns direct to Somerset House, and entries from these sources constitute the Marine Register Book. In the year 1875, 3009 deaths were recorded, and of these 786 deaths (including 4 of soldiers, marines, or seamen of the Royal Navy) occurred among passengers on board merchant vessels at sea. In the same year 4076 deaths occurred among sailors at sea (including some of those on board colonial and fishing vessels), making the rate of mortality 20·4 per 1000 of the registered strength, as there were in registered vessels in 1875 a total of 199,667 seamen, as reported by the Registrar-General of Shipping and Seamen. It appears that 24,007 lives were lost in the nine years 1866-74 by drowning, 15,063 by wreck, and 9544 by accidents, making the average annual number drowned 2734, or 13·7 per 1000 of strength. The proportional number lost by wreck was 8·4, and by accident 5·3 per 1000. These percentages appear, and are, indeed, very large, and are evidently directed by inference to the question of unseaworthiness of ships, as well as of the hands who man them. But, as is pointed out in our contemporary the *Shipping Gazette*, any sort of comparison drawn between the mortality that occurs on Royal Navy and merchant ships is manifestly unfair to the latter. Our blue jackets, marines, engineers, and firemen are all picked men. They have (presumably) the best food that can be procured for use at sea, all their ships (except the gun-boats) carry medical officers, they are never troubled with foul cargoes, and, as is pertinently remarked, "if an epidemic or endemic fever is raging badly at any port, it is usual to order her Majesty's ships away, and to take every precaution against the sacrifice of life." In the merchant service none of these advantages exist. There is no medical examination before sailing, the food served out is often indifferent, and sometimes bad, the majority of vessels carry no surgeon, and whether a port be healthy or unhealthy, the ship goes to the port for which she is chartered, and remains there until her cargo is discharged and another taken in. Moreover, no attempt is made to protect merchant seamen at home by extending the operations of the Contagious Diseases Act.

THE LANCET.

LONDON: SATURDAY, AUGUST 25, 1877.

FEW members of our profession deserve more thoroughly the honour of presiding over the British Association than the veteran Glasgow professor, Dr. ALLEN THOMSON. Professor, in fact, he is no longer; but it is as such that he is familiar to the whole profession, and regarded almost with personal affection by old Glasgow students. As a scientific worker, as one of the most distinguished of living embryologists, he is much less known to the present generation of medical men. The details of scientific knowledge and the name of their discoverer are soon separated by the ever widening stream of science, and specific fame soon disappears from the surface of scientific literature. But Dr. ALLEN THOMSON is a scientific anatomist as well as a physiologist, and in him we may see one of the last examples of the close union of the two sciences which, not long ago, obtained widely in medical teaching.

Dr. THOMSON probably chose wisely in selecting as the subject of his address the region of scientific work with which he is most familiar. He is essentially a man of facts, and not of theories, and devoted his address mainly to an exposition of the facts among which he is most at home. But the subject is not one which lends itself readily to popular exposition, and the address of the President of the Association has long assumed a more or less popular character. This has occurred, not only from the publicity which the press gives to its details, but also from the constitution of the Association itself. The departments of science are so specialised that even those most familiar with one branch may be as little at home in the details of another branch as one who is altogether outside the scientific world. The facts with which embryology deals are withdrawn from even the most attentive common observation; they are highly complex in character, so that their popular description is obscured by technicalities and unfamiliar terms, and it is probable that even many members of our profession will find a large part of Dr. THOMSON'S address anything but "easy reading."

The subject of the address was, however, a theme of high interest—the parallelism between the development of the animal world as a whole and that of the individual in its higher ranks. The unit is the type of the mass; the history of the organic microcosm is that of the organic macrocosm; the evolution of species is exemplified in the development of the individual. A brief outline of the theory of development of animal life on the globe, the one term of comparison, prefaced a detailed exposition of the development of the embryos of the higher animals, the other term of the comparison. But the subject of development from an ovum or germ raises at once the question of its universality, and brings us face to face with the problem which formed so prominent a topic in Dr. ROBERTS'S discourse at Manchester—the occurrence of abiogenesis. Dr. ALLEN THOMSON avowed his agreement with Prof. HUXLEY in the opinion expressed in the Presidential Address in 1870, and his conviction that the investigation of the last seven years has been unfavourable to the doctrine of spontaneous generation, and that "no development of organism, even of the most simple kind, has been satisfactorily observed to occur in circumstances which entirely excluded the possibility of their being descended from germs or equivalent formative particles belonging to pre-existing bodies of a similar kind." He did not discuss the question or show to what extent he had given due consideration to the evidence with which Dr. BASTIAN has so ably supported the opposite view, but the opinion we have quoted is at least noteworthy as that of one well-trained in weighing evidence on biological questions, and noteworthy also on account of its agreement with the conclusion of Dr. ROBERTS, on which we commented last week.

The identity between the opinions expressed in the two addresses is still closer. Dr. ALLEN THOMSON insisted on the importance of a constant regard to the part played by minute organisms in their commercial, social, and sanitary relations. He dwelt with emphasis, but with prudent caution of phrase, on the fact that the chemical processes of both fermentation and putrefaction are "coincident with and casually (if not essentially) dependent on the growth and multiplication of these minute organisms." In alluding to the guidance which the theory of biogenesis has afforded in the investigation of many forms of disease, he avowed his belief that these minute organisms "are, as nearly as we can perceive, the very essence of contagia." This testimony is no doubt of far less value than that which Dr. ROBERTS bore to the same opinion, for the province of investigation lies outside the sphere of Dr. ALLEN THOMSON'S individual work, but the coincidence of opinion in the two most authoritative expositions of medical science is not a little remarkable.

It is impossible here to follow Dr. THOMSON in his exposition of the facts of embryology, which he put before his audience with much care, and with as much clearness as the nature of the subject would permit. The processes of the development of the ovum are of profound interest, for in the simpler conditions of the beginnings of form and structure we may hope to find some light on the nature of the process of vital growth, and on the conditions which regulate the ultimate result. At present almost all, except the formal process, is concealed; and it would seem as if an involution of complex influence existed in inverse proportion to the apparent simplicity of the outer form, and that the nearer we seem to be to the secrets of which we are in search the further in reality we are from their discovery. Here and there, however, a ray of promise may be traced that in the simpler vital process we may find fresh evidence of the operation of the laws which obtain outside the realm of life. One such instance is mentioned by Dr. THOMSON. The subdivision of each segmenting mass of the ovum is accompanied by a peculiar phenomenon of a double conical or spindle-shaped radiation of the protoplasm, which seems almost as if it marked out the lines of molecular force acting in the organising process. "Considered in connexion with what we know of the movements which frequently precede the act of

division of the yelk-spheres, we seem in this phenomenon to have made some near approach to the observation of the direction in which the molecular forces acting in organisation may be supposed to operate."

The comparison between the inferior organisms and the "phase of lower life" through which the higher organisms pass, has been rendered more definite by the theory of HAECKEL, according to which all animals take their origin from a form of "gastrula," of which the fresh-water hydra may be taken as an example, in which two sacs represent the primitive layers of the blastoderm of higher creatures. The remarkable variations in the way in which the layers of the blastoderm are formed, are somewhat simplified by VAN BENEDEN'S discovery, that they are to be traced in the mammal's ovum, as in that of lower creatures, to a primitive difference in the two cells into which the segmentary mass divides—a fact full of promise that we may be able to trace transitions between the earliest embryonic forms occurring in different kinds of ova.

DR. ALLEN THOMSON pursued the comparison in more detail in relation to those particulars in which the similarity of development of the individual and of the type can be most clearly seen—the branchial arches, the development of the vertebral column, and the development of the heart; and he showed, through the amphioxus and the ascidia, how close an affinity may be traced between organs of circulation and respiration which appear at first to belong to very different types.

The concluding portion of the address embraced a summary of the general plan of development. In their simplest form the various organised beings are, so far as our powers of observation enable us to know them, identical; in the lower grades of animal and vegetable life, they are so similar as to pass by almost insensible gradations into each other; and in the higher forms this fundamental simplicity is such that it is possible to trace through the transitional forms a general plan of life organisation. The process commences with a minute mass of protoplasm. The second stage is the enclosure of that protoplasm in an organised cell. The third is the differentiation of two productive elements, and their combination for the more highly endowed organising germ-sphere. The fourth stage is the multiplication of the fertilised cell, and its conversion into organised laminæ, which develop into the more or less complex resulting structures by histological processes which are in all cases similar. Hence, "in the production of the endless variations of form assumed by the organs and systems of different animals in the course of their development, the processes of cell production, multiplication, and differentiation remain identical," and suggest forcibly the influence of a law of unity and continuity. These phenomena lead, in Dr. ALLEN THOMSON'S opinion, by necessary steps to the doctrine of evolution. "The ontogenetic development of the individual in the higher animal repeats, in its more general character, and in many of its specific phenomena, the phytogenetic development of the race."

THE Select Committee appointed "to inquire into the operation of the Lunacy Law, so far as regards the security afforded by it against violations of personal liberty," has returned the evidence taken without presenting a Report. It is desired that the powers conferred on the Committee may be renewed next session "for the purpose of agreeing upon a report to be submitted to the House." This would seem to show that the task of digesting the material collected for the formation of a judgment has proved too much for the Select Committee, and we are not in the least degree astonished at the difficulty encountered. Anyone with strength of will and health of brain to wade through the volume of evidence printed can scarcely fail to be wofully embarrassed by the perusal. If the Committee started with any tolerably clear view of the subject under consideration, they must have been confused and confounded by the contradictory testimony of witnesses apparently engrossed with the single idea of supporting each his particular point or crotchet by wholesale, if not reckless, assertion.

No useful purpose would be answered by attempting a *résumé* or even an analysis of the evidence. Speaking generally, it may be described as presenting a kaleidoscopic view of the conflicting and ever-shifting aspects of opinion on the subject of lunacy. We fail to make out a new point or a novel feature of the case which has been *sub judice* during the last quarter of a century. The old questions remain unanswered, the problem as a whole is not appreciably nearer solution than in the days when CONOLLY and his contemporaries discussed and demonstrated its difficulties. We shall be curious to see what new light the Select Committee of 1877–78 may be able to throw on the controversy. The illuminating power must certainly be found outside the inquiry. We should not be understood to condemn the evidence *en masse* or to stigmatise the opinions expressed by competent witnesses as worthless. The mistake made was in muddling two totally distinct lines of investigation and receiving testimony on separate topics without discrimination as to the competency of witnesses or the nature and purpose of their expressed opinions. Instead of mature judgments, the committee contrived to elicit *ex parte*, and in a majority of instances controversial, dicta. Witnesses were, so to say, pitted against each other, and now and again placed in evident antagonism to individual members of the committee, who seem to have entered upon the inquiry with preconceived opinions or interests to uphold. The confusion produced by this unfortunate mode of investigation is much to be regretted. A simple and obvious course of procedure would have been to prosecute the inquiry into special cases of alleged grievance, and thus get rid of the disturbing element before commencing that calm scrutiny of the legal and general situation which the question raised demanded. By taking two dissimilar and incompatible topics together, evidence was rendered nugatory and opinion discredited.

The broad lessons of the inquiry, so far as we can make them out, are the following:—The law relating to certification is not of a nature to afford security against the violation of personal liberty. Neither the method of examining, nor the wholesale practice of branding persons suffering from mental disturbance with the stigma of lunacy, is satisfactory. The system of inspection carried out by the Commissioners in Lunacy is by no means of a nature to assure the public mind. It has done good, but this has been by exposing, and in that

way controlling, the conduct and administration of asylums. The supervision has practically nothing personal in its immediate consequences. There is no means of placing or keeping individual patients under observation. When once certified, the patient becomes a unit in a multitude of the insane; so far as any authority outside the asylum is concerned, there is no guarantee of supervision. The function of the Lord Chancellor's Visitors of Lunacy is more directly personal in the protection it affords, and the Committee will do good service if it can devise means by which this guardianship may be extended to all classes of the insane irrespective of the property qualification.

Whatever else may result from the inquiry, there should be a final recognition of need for reform in the matter of medical qualification for the signing of certificates, either requiring the possession of special knowledge on the part of private practitioners, or vesting the power of certifying in the hands of public officials. It may be expedient to transpose the order of events, removing a patient to an asylum as to a hospital, and certifying afterwards, as suggested by one of the witnesses. Again, some arrangement should be made by which patients may be inspected personally at short periods by a public authority acting under the direction of, and responsible to, the Commissioners in Lunacy. We fail to see the point of an objection urged against employing medical officers of health in their several districts for this purpose. If it be the fact that these gentlemen are not at present qualified for the duty, that evil might be remedied by requiring medical officers to obtain certificates in lunacy, together with State Medicine, similar to those now granted by the University of Cambridge. The objection is the more extraordinary because the law recognises the competency of every practitioner to sign a certificate disabling a person from the enjoyment of social privileges and the exercise of social rights. If competent for diagnosis, surely the practitioner must be qualified to supervise the progress of a case under treatment. These are salient points of need, and the inquiry will be fruitless if they are not satisfied, whatever else may be left to the cumulative pressure of public opinion to amend.

OBSTETRICS AS CINDERELLA.

"CINDERELLA in the guise of Obstetrics," as presented to us by Dr. BARNES, is not a young lady to be despised. Dr. BARNES is perhaps a little too sensitive to the slights which have been put upon her by "her more favoured sisters Medicine and Surgery." Such sensitiveness as his would better become one who is less familiar with the merits and the graces of the fair one who is destined to such an honourable future, and who already has an exponent of her charms such as her more favoured sisters might envy. All that Dr. BARNES says, however, and all that he lets us know that he feels about the light esteem in which obstetricy is held, or rather has been held, is well justified. Before the present development of specialism took place, while yet there was no such division of labour in medicine as now obtains, obstetricy was avoided and rather contemned by leaders in both the great branches of medicine. They were very much of Sir ANTHONY CARLISLE'S opinion, that the midwifery of the country might be undertaken by the wives of the general practitioners. And the spirit of this feeling still continues. It cannot be by mere accident, for example, that an obstetric physician has never been appointed to represent either the Crown, or a corporation, or a university, in the General Medical Council. If a fair estimate be made of the work of obstetric physicians, and of its importance either in regard to humanity or to science, this exclusion must appear altogether unjustifiable. But there are better days in store for "Cinderella," and it only needs a few more such protests—dignified and withal slightly indignant—as that of Dr. BARNES in his address at Manchester to secure for her a recognition that even he will be satisfied with.

Dr. BARNES'S theme at Manchester was the scientific and political relations of obstetrics to medical science and the organisation of the profession, and he handled it in such a way as to satisfy every intelligent practitioner that obstetrics must be regarded as the study of a department of medicine full of special facts of great interest and of very wide bearing. These facts may be viewed from either a physiological or a pathological standpoint. Pregnancy, indeed, serves admirably to illustrate the fact, so properly insisted on by Dr. BARNES, that physiology and pathology pass insensibly into each other—that the whole study of medicine is but a part of the study of physiology. A pregnant woman is presumably in perfect health. But Dr. BARNES shows that, in virtue of her pregnancy, she is in a special state—that there are changes in her nervous system, in her blood, in her vascular system, in her glandular system. Nervous force is exalted, giving a liability to spasms, twitches, or convulsions; the composition of the blood is different—the red globules are diminished, the white are increased, and it contains more fibrine and more water; new secretions or discharges take place, and relieve the increased vascular tension; there is a new growth in bloodvessels, not only in the uterus, but in the peripheric parts of the body, such as the development of veins (sometimes never wholly recovered from), and which constitutes, when well-marked, as Dr. BARNES says, one of the best tests of early pregnancy. The great local constructive work going on in the uterus has, first, mechanical effects, then great effects in inducing much vascular activity, and then in throwing on the blood waste materials, the excretion of which tests the kidneys, liver, &c., occasionally giving rise to albuminuria, which is not always transient. Such is the condition of pregnancy. Would we ever have had such an exposition of it if obstetrics were not already a part of the great subject of physiology and medicine? or does any medical man survive so obtuse or so unfeeling as to think such a condition needing only the care of "the wives of general practitioners"? When pregnancy ends in labour a new phenomenon has to be studied, full of vital and mechanical problems of the deepest interest, and attended with suffering and with risks of mortality and damage which are worthy of the consideration of the best heads in the profession; and when labour ends, we have a condition involving physiological processes so finely divided from diseased ones that the line is often overstepped, and the normal temperature and quiet pulse are replaced in a few hours by rigor, pyrexia, and distress—too like that with which surgeons are so familiar after amputation. The truth

is, that the exposed surface of the uterus leaves the woman open to blood-poisoning, very much as if her thigh had been amputated, with the additional risk of a large hollow muscular organ rapidly emptied, and undergoing a process of waste and involution which involve chances of embolism and thrombosis—lesions which have received their chief illustration from obstetric study.

A branch of medicine that has to deal with, to prevent or control, such states as these, can never again be relegated to the ignorant. Neither can any medical examining body that would maintain its character for intelligence and efficiency any longer exclude from the subjects of examination, midwifery and diseases of women. Such an omission, if persisted in, would deserve to be represented to the Privy Council, as involving, not only a risk that men might enter the profession incapable of fulfilling some of the first duties they will be called on to discharge, but involving a risk of ignorance of processes which every surgeon and every physician should understand, and which cannot be understood apart from the study of midwifery. We are not prepared to support Dr. BARNES in saying that the diploma of the College of Surgeons, being registered, confers legal right to practise in all departments; but it is a diploma of great value and authority, and it is discreditable to the College that, as it once failed to examine in medicine, thinking that a man could be a surgeon without knowing anything of medicine, it still fails to examine the candidate for its ordinary diploma in obstetrics, and by maintaining the principle of an examination for a special licence in obstetrics treats obstetrics as something divorced alike from medicine and surgery. Such an idea is thoroughly unsound, both scientifically and politically. It is largely at the root of the agitation for a class of women-doctors, in whose hands medicine would be narrowed and impoverished, and it is offensive and almost insulting to men devoting their lives to obstetricy, but whose scientific and professional culture would compare favourably with that of any other leaders in the profession.

THE cardio-vascular phenomena of epilepsy have never so far as we are aware, been fully investigated. Certain points, such as the condition of the pulse during and after an epileptic fit, and also the changes observed in the retinal vessels, have received some attention, though the statements which have been made as to the latter are contradictory, some stating that vaso-motor spasmodic contraction is the condition observed, others that turgescence accompanies or follows the fit. And from these observations various theoretical conclusions as to the nature and treatment of epilepsy have been drawn.

Some important experiments have been recently made upon this subject by Dr. MAGNAN, whose observations on artificial epilepsy are well known. The experiments were made on dogs in which artificial epilepsy had been induced by the injection of absinthe, the epilepsy thus produced being, as M. MAGNAN has shown, in every respect like ordinary epilepsy as to the phenomena observed. His object was to ascertain the condition of the arterial pressure during the fit, and then to compare the pulse and arterial tension with the muscular contractions, in order to discover their relations. In one set of experiments the observations were made by means of LUDWIG'S kymographion applied to the femoral artery, in the other the comparison was made by MAREY'S polygraph, a tube being inserted into the carotid, and the other index attached to the hind limb of the animal.

In the first set of experiments it was found that during the period of tonic spasm the pulse became more frequent, its respiratory curve entirely lost, and the arterial pressure rapidly rose, attaining its maximum near the end of the tonic period, the oscillations of the lever being short and abrupt. With the onset of clonic spasm the pulse became extremely slow—from six to eight times less than normal,—the pressure falling enormously, and during the diastolic period being almost nil. With the end of the clonic spasm the pulse regained its normal frequency or became rather more rapid than normal. It was found that section of the vagus had the effect of entirely removing these phenomena. The heart's action was of course accelerated, as is always the case, and the respiratory curve was annulled during the tonic spasm, in consequence of fixation of the chest-walls, but the arterial pressure did not rise during the tonic period, nor did the retardation and fall of pressure take place during the clonic spasms.

The second set of experiments were made for the purpose of comparing the vascular phenomena with the muscular spasms. During the tonic period the latter were indicated by a nearly straight line, interrupted by very fine waves, showing the rapidly succeeding contractions which constitute the tonic spasm. This condition lasted for about six seconds; then the vibrations became more ample and slower, gradually increasing in amplitude and diminishing in frequency to the end of the clonic period, when their entire cessation is indicated by a straight line. This clonic period lasted about thirty seconds. As in the other experiments, slowing of the pulse and enormous fall in arterial pressure were observed during the clonic period. During the tonic spasm the pressure in the carotid, which before the fit was 14 centimetres, rose to 17 centimetres, then rapidly fell as low as 7 centimetres during the more rapid clonic spasms, rising again towards the end of this period to 15 centimetres, the pulse at the same time increasing in frequency. Immediately after the fit the normal pressure was regained, and the pulse returned to nearly its usual pace, though slightly accelerated. M. MAGNAN found, however, that this acceleration of the pulse was not more than would have been produced by a similar amount of muscular exertion, and that, as a matter of fact, it was proved, by numerous observations on epileptics just after a fit, that the acceleration of the pulse is not greater than was produced in a healthy person by scrubbing the floor for three minutes.

The observations seem to prove, as M. MAGNAN observes, that the heart is partially tetanised during the tonic convulsion, and contracts rapidly and forcibly, but does not dilate properly, this tetanic contraction being produced through the vagus nerve. The extreme fall in the pressure and slow action which ensue may not improbably be due to temporary exhaustion of the heart muscle, and gradual re-adjustment of the cardiac and arterial pressure, the diastole being much prolonged, the systole incomplete and feeble.

M. MAGNAN points out that the fatal result which sometimes occurs during an epileptic fit may be due to the heart, either by tetanisation during the tonic spasm, or by syncope during the clonic period and lowered arterial pressure. The former mode of death would be analogous to that in digitalis poisoning, but the short duration of the contracted condition makes it probable that such a result would be extremely rare. These experiments raise some very interesting speculations as to the causation of the phenomena of an epileptic fit, which would be out of place here. But it would be worth while to ascertain whether vaso-motor spasm has not something to do with the increased arterial pressure in "natural," if not in artificial epilepsy.

Annotations.

"Ne quid nimis."

STATE MEDICINE.

Now that we have had the opportunity of reading the memorial of the Joint Committee on State Medicine of the British Medical and Social Science Associations, lately presented to the Premier, we cannot affect to be astonished that he should have refused to receive a deputation of the Associations to urge the prayer of the memorial. In the first place, the memorial obviously proceeds upon an assumption that his lordship's apopthegmatic observations, from time to time, on the surpassing importance of the sanitary welfare of the population in his views as a statesman, must be taken in a literal sense, and clearly it might be very inconvenient for the Premier to admit this. In the second place, the memorial advances views especially as to the public health medical service so condemnatory of the sanitary administration of the present Government, that it was hardly reasonable to call upon the head of the Government to have them instilled into his ears as well as read them. It is true that the present Government has simply copied the follies of the preceding one in this respect; but this rather aggravates than modifies its position with respect to sanitary work. Moreover, the head of the late Government did not commit himself to high-sounding expositions as to the place of sanitary work in statecraft. Think for a moment of the Premier being asked to consider a suggestion that the Public Health Medical Service should form "part of a great department of the State," under central control, the whole policy of the present Government, as of the previous one, with respect to this service, having been to make it local and without co-ordination! In other words, the Joint Committee still harp upon *efficiency* of the Service as the primary question to be considered, as if two Governments had not decided against this view of the subject, and relegated it to a bureaucratic limbo. Obviously the Joint Committee does not know when it is beaten, and it possibly foresees a not very distant future when ratepayers and electors may begin to ask whether it is a commendable economy, statecraft notwithstanding, to disburse vast sums of money to secure such utter inefficiency of local and central administration as that which now exists.

Dr. Ransome's address, at Manchester, on State Medicine, was worthy the occasion of its delivery. Nothing could well be happier than his exposure of certain fallacies as to over population and the influence of sanitary works on the duration of life, which have lately troubled some sanitary workers. But it is to a suggestion thrown out in the sketch of what may come to pass when we attain to a scheme of true State Medicine with which he closed his address that we would ask attention. Dr. Ransome would include in the scheme a College of State and Legal Medicine. This suggestion again raises the important question, which to the present has been too little considered by the profession—namely, the education of medical men for the special duties of the public health medical service. We propose to revert to this question at an early period.

PROFESSOR REDWOOD ON PHARMACY.

THE recent meeting of the Pharmaceutical Society at Plymouth gave Professor Redwood, its distinguished President, an opportunity of reviewing the rise and progress of pharmacy in this country, and the result was a very happy and specially opportune address, pertinent to the occasion, and pertinent, too, to a subject that has been, and is likely again to be, the theme of much grave discussion. The speaker commenced his historical sketch by showing the connexion that existed between medicine and pharmacy from the commencement of the fifteenth century. Following the history down to 1522, when the College of Physicians Act was passed, it appeared that at this time "the only class of men who could be properly called apothecaries were the assistants employed by the physicians to prepare their medicines." Druggists occupied then no recognised position as traders, the crude drugs being mostly sold by grocers "and by herbalists and simplers, who collected indigenous plants." But as physicians began to write prescriptions (or "bills," as they were then called), it was found necessary, about 1618, to compile a pharmacopœia, prescribing and dispensing being distinct operations. The Apothecaries' Company was established about this time, the number of its members being 114, which then included the apothecaries in London, as well as some druggists or drug-grocers brought in to make up the number to that of the physicians practising in the metropolis. The latter body subsequently established dispensaries "ostensibly to enable the poorer classes to get prescribed and other medicines at a moderate cost." But these establishments, having been the cause of much acrimonious discussion between the physicians and apothecaries, were closed about the middle of the last century, when, as the speaker observes, chemists and druggists began to display the notice "Physicians' prescriptions carefully prepared." Professor Redwood went on to remind his hearers that in France, Germany, and Italy, "the tendency of legislation was to effect and maintain a complete separation between the treatment of disease and the preparation and dispensing of medicines, the law defining and limiting the nature of the occupations." So that on the Continent no unauthorised "middleman," analogous to the English apothecary, has ever existed. Pharmacy therefore has, "not only in France, but in most other continental countries, assumed the character of a profession, the members of which fill an important position in the social scale." We must pass by and refer our readers to many interesting particulars given as to disputes between the apothecaries and chemists during the 18th century, caused chiefly by the encroachment of the latter upon the business proceedings of the former. We need not recapitulate events referred to in THE LANCET of June 16th, the chief of which was the passing of the Apothecaries Act in 1815, which legalised the Society of Apothecaries as an examining body, and exempted chemists from the clauses of the Act as regards "the buying, preparing, compounding, dispensing, and vending drugs and medicinal compounds, wholesale and retail." "A long interval," said the speaker, "was allowed to elapse after the passing of the

Apothecaries Act before any measures having a similar object were adopted regulating the qualifications of chemists and druggists. The Pharmaceutical Society was at length established, and, as we all know, has proved a great success. Professor Redwood thus pointedly and pertinently concluded a very able address: "A distribution of medical and pharmaceutical duties has been gradually effected to meet the exigencies of a great mixed population, and to the extent to which these have been established by law the public are provided with the means of having their medical wants supplied by men well qualified in their several departments."

We commend these concluding remarks to the mature consideration of those who, after a discussion at the Pharmaceutical Society, referred to in THE LANCET of last week, voted with the majority.

SANITARY ITEMS FROM INDIA.

THE report of the health officer for Calcutta (Surgeon-Major Dr. Payne) for the second quarter of the present year is as suggestive as instructive. In this report he pursues still further, in its practical relations, the connexion between outbreaks of cholera in Calcutta and the use of "filthy water." He writes, "Nowhere has there been a threatened outbreak without the presence and the use of filthy water, nor has there been a single example of the removal of the water which has not been followed by arrest of the disease." But, alas! the filling up of the tanks scattered throughout the native quarters of the city, and from which the "filthy water" is most commonly obtained—a procedure which Dr. Payne has so strenuously urged, and the necessity for which becomes more and more apparent as a knowledge of the mode of prevalence of disease in Calcutta becomes clearer—can only be proceeded with haltingly. The funds at the command of the municipality which can be devoted to the purpose are, unfortunately, it would seem, very limited.

An important change has been made in the sanitary administration of Calcutta during the quarter to which the report refers, by the introduction of what is called the "Halalcore system" of Bombay. "It consists in the entire removal of night-soil by paid servants of the municipality, controlled by its officers." A strike of the "mehters," employed by the householders in removing filth, and who did their work most inefficiently or left it undone, has contributed to bring about this most important and much needed reform. On a former occasion the "mehters" successfully resisted an attempt to put their proceedings under proper control by the municipal officers. A like resistance now has helped to bring about the change noted.

"What has become of the scheme for the improved sanitation of Lahore?" asks the *Civil and Military Gazette*. Such a scheme, it would appear, has been in prospect since May, 1876, and the municipality early in the present year received the sanction of the Government to effect a loan to carry out the scheme. But so late as the 21st July the money was not forthcoming, and nothing had been done to better the sanitary state of Lahore.

When doctors differ, then is the opportunity for "common sense." At least so thinks a correspondent to the *Times of India* anent the sanitary improvement of Bombay. He tells us that the sanitary doctors, engineering and medical, who have been called in to advise the Municipality of Bombay on the health condition of the city, clash with each other in opinion, and he cites Dr. Blaney as his authority for the statement that the part of Bombay which is best drained is the most unhealthy. He thinks it time, therefore, that "common sense" should have an innings, and he presents himself first at the wicket. The moment he places himself he shows that he has no business there, for he stumbles hopelessly over a fallacy. For when he writes of "best-drained," he writes, as he afterwards explains, of a kind of drainage which admits of the "soakage of filthy material from the drains into the flooring of the houses"; in other words, of drains which are drains by a fashion of speech only. By all means reconstruct the native town if this be possible, as he advises, and develop more, if also possible, manual labour in the removal of filth. But what does "common sense" say as to the possibility?

GUARDIANS AND SURGICAL OPERATIONS IN WORKHOUSES.

A SMALL minority of the guardians of the poor in the union of Portsea island have had ere now considerable success in rendering the post of medical officer to their workhouse well-nigh untenable. One of the most energetic of this minority, at a recent meeting of the board, moved a resolution, of which he had given notice, to the effect that whenever the medical officer of the workhouse proposes to perform a surgical operation on an inmate, he shall give sufficient notice to the clerk, so that the latter may inform each guardian of the proposed operation, and that the consent of the guardians shall be obtained before the performance of the operation. This resolution contained a further instruction that in every case in which the death of an inmate follows shortly after the performance of an operation, notice of the same shall be given to the guardians. It is satisfactory to find that this resolution, besides its proposer and seconder, found no support among the Portsmouth guardians, one of whom pointed out that they had no more right to interfere in the case of an operation than they had to call upon the chaplain to submit his sermons to the board previously to preaching them. It is to be hoped there is no board of guardians a majority of which would be willing to accept the responsibility of discussing and deciding upon the proposal of a medical officer to perform an operation upon an in-door pauper. Should such a board of guardians, however, exist, confidence may be felt that the Local Government Board would not confirm a resolution to give guardians the power to hamper medical officers in the performance of their duties in a manner as dangerous to the inmates of workhouse infirmaries, as it would be derogatory to the medical officers themselves.

HEALTH OF GLASGOW.

ONE of the most interesting and important papers read at the recent meeting of the British Association was that of Sir James Watson on amending the sanitary condition of large towns, as illustrated by the improvements recently effected in the City of Glasgow. The ruling authorities of this densely-populated place set to work ten years ago under an Improvement Act of their own, which, though similar in some respects to the Artisans' Dwellings Act, gives legislative powers to build as well as to destroy. Up to the end of May last more than a million and a half of money had been expended, and there is a balance of about £35,000 in favour of the undertaking, represented by the property sold, and the actual value of that which remains on hand. As taxes have been levied, and a park has been purchased and fitted at a cost of £40,000, and sewers, roads, &c., have been made, the positive deficit is about £150,000. But costly as these improvements have undoubtedly been, the benefits conferred are indisputable. Model lodging-houses have been erected in six different parts of the city for the extremely poor class, 3½d. per night being charged for lodgings, including fire, gas, and cooking utensils. The lodg-

ings are self-supporting. Sir James Watson shows that these operations have resulted in a great diminution of crime, and in the favourable condition and appearance of the juvenile population. When fever or any other epidemic disease attacked the inhabitants of the courts and alleys lately demolished the sickness and mortality were appalling, the latter often reaching the rate of 70 per 1000. Just now the mortality of Glasgow is 21 per 1000, but it is still often very high. The water-supply of the city is good and practically unlimited, but the Clyde is still the common sewer, and the removal of that defect should next occupy the attention of the sanitary authorities of Glasgow.

THE DISMANTLING OF THE HÔTEL DIEU.

THE energetic editor of *Le Progrès Medical* has been vigorously attacking the administration for the ill-considered haste with which the transference of patients has been made from the old Hôtel Dieu into the new and unfinished building on the opposite side of the Parvis de Notre Dame. In the issue of his journal for the 18th inst., M. Bourneville returns to the attack. He begins by referring to the manner with which a communication, addressed by him to the prefect of the Seine, was discussed in the Municipal Council at its meeting on August 7th. In that communication he asked M. le Préfet the following questions:—1st. Who is responsible for the dismantling of the old Hôtel Dieu? 2nd. Were due hygienic precautions taken? Why were patients transferred to the new building before the water- and gas-supply were laid on, the *fosses d'aisances* established, and when neither the dispensary, nor the ward-offices, nor the baths, nor the kitchen were completed? 3rd. Why were patients in need of rest and silence placed in the midst of perpetual noise among workmen still busily engaged at all stages of their work? In reply the prefect said that, in the first place, it was no concern of the Municipal Council to move in the matter, and that the removal of the patients was made under conditions which were perfectly satisfactory to the Administration of Public Assistance; that all due precautions had been taken in the transport of the sick, and that their removal had not interfered with their treatment. He added that no complaint had reached him from the staff of the hospital, who were in a better position than anyone else to point out what measures should be taken in the interest of the patients under their care. To this M. Bourneville retorts that, in spite of repeated reminders, the work of removal has been most hastily done, and many obvious sanitary measures have not been taken—for instance, the furniture removed from the old buildings was either not cleansed at all, or else too hurriedly to be effective. As regards the medical staff, he affirms that none of them were even consulted in the matter, either as to the most suitable time for the removal or as to the precautions necessary to be taken. The baths are not yet erected; no more is the kitchen, so that all the food of the patients has to be brought from the old building; and the dispensary (*pharmacie*) is not yet ready. The patients are still in the midst of the noise of workmen. "The *salle des morts* and the *salle d'autopsies* are not yet finished, and the dead are carried across the Place du Parvis, by the Petit Pont, the Quay, and Rue de la Boucherie, to the unearthly cave which for so many long years has served for the eminent physicians of the Hôtel Dieu as a place for making their post-mortem examinations." All who have visited the post mortem room and dead-house of the Hôtel Dieu—dark, dank, and inodorous—will agree with M. Bourneville as to its being a *cave immonde*; it is more—it is a very charnel-house; and the sooner the new building is completed in this department also, the better for the credit of the Paris administration.

LAUNDRIES.

THE disclosure recently effected by our inquiry as to the state of private laundries clearly points to their abolition, and the establishment of institutions conducted on sanitary principles, where the community may send articles of clothing and household linen with the assurance that they will be thoroughly and safely cleansed. It is intolerable that in the process of washing and "getting up" our dress should be infected with the germs of disease. No system of inspection is likely to be effectual. When the public washhouses were opened it was supposed the population might be protected. The experiment has failed. The matter is not one in which the Legislature can be asked to intervene. Self-help is the only remedy. It may be taken for granted that washing cannot be done at home; too many troubles and inconveniences beset the task. It is therefore imperative that some new provision should be made. The most practical course would be to start a company, or by combination in some way arrange for the construction of an efficient establishment at some suitable spot a short distance outside the populous district, where the most perfect system of cleansing and drying can be brought into operation. It only needs a spirited effort to carry into execution a scheme satisfying all the requirements of the emergency. We cannot believe, now that the evil has been pointed out and it comes so directly home to every family, there will be any great delay in meeting the difficulty. Care must of course be taken to avoid serious embarrassment to the poor women who live by this trade. The precise details of the course to be pursued must be left to the ingenuity of those who promote the necessary enterprise; but the pressing needs may be stated briefly as follows: an abundant supply of pure water; a suitable site beyond the reach of contamination; ample space and good air for drying; machinery and buildings so arranged that "foul linen" may be kept entirely distinct from the ordinary articles to be washed; all appliances for the disinfection and purification of every article, without injury to the fabric; and last, but not least, moderate charges. The price commonly exacted by laundresses for the sorry service they render is exorbitant, and leads to the exercise of an economy in cleanliness which in itself is most disastrous. The exigency is so great that no time remains to dally longer with a question often incidentally raised, but never, we believe, placed forcibly and in its true colours before the community, as we have now presented it. The discovery of a remedy will scarcely be delayed; but it should be understood that a reform so sweeping as that for which this exposure calls is not to be effected with any of the institutions now extant.

IMPERFECT VACCINATION AND THE LOCAL GOVERNMENT BOARD.

THERE are abundant signs that the small pox epidemic of 1876–7 is rapidly passing away, and although its fatality has been small compared with that which prevailed in 1871–2–3, its results have been disastrous enough in London, Lancashire, and Cheshire, to call for some explanation of the causes of this recurring fatality in a population the vaccination of which is carried out with a constantly increasing approach to completeness. The proportion of deaths from small-pox of children aged less than five years, in London, during the eighteen months ending June last was 28 per cent. of the deaths from this cause at all ages. Although this proportion showed a decline from that which prevailed during the epidemic of 1871–2 (which was 37 per cent.), it affords conclusive evidence of neglect of vaccination. The proportion of deaths of young persons aged between five and twenty years was nearly as large as that of children under five years, and

included a considerable number certified to have been vaccinated. Now we have frequently urged that these facts prove not only neglect of vaccination, which is steadily decreasing, but a large amount of inefficient vaccination, which is mischievous in affording only partial protection from small-pox, and also in discrediting the value of vaccination. It has long been evident that a large proportion of children who have been what is called vaccinated are really in great measure unprotected. The exceptional fatality of small-pox in Hackney induced Dr. Tripe, the local medical officer of health, to get permission (which was obtained with some difficulty) to examine the vaccination-marks of the children attending the Board Schools in Hackney. He found that something like 25 per cent. of the children under twelve years of age were not properly protected by satisfactory vaccination-marks from an attack of small-pox. After about 800 children had been examined, Dr. Tripe placed himself in correspondence with the Local Government Board, who informed him that no public funds were available for the revaccination of children under twelve years of age who had been "successfully vaccinated." The term "successfully vaccinated," in the official returns, wants definition. Here we have, in Hackney, 25 per cent. of presumably "successfully vaccinated" children not bearing satisfactory marks, and yet the Local Government Board expresses its inability to take any measures to obviate the mischief which will one day arise from this large proportion of worthless vaccination.

THE WATER-SUPPLY OF MANCHESTER.

IT is an instructive comment upon the position which Manchester has taken with respect to the so-called "sewage question," that the Corporation of that city proposes to go to Parliament next session and seek authority to tap Thirlmere, in Westmoreland, for the better supply of Manchester with water. Careless of the susceptibilities of sanitary engineers, Manchester has steadily declined to "waste" water over waterclosets. She has pleaded, first, a penury of supply for the purpose; and, next, audaciously supplanting this plea by another, averred that the watercloset was an abomination for a population of the sort she had under wing. We are here concerned simply with the plea of penury of water-supply. Few outsiders, perhaps, could readily reconcile it with a daily supply of 17,000,000 gallons and a margin of 25,000,000. It now appears, however, that that margin is held by the Corporation to be so limited that measures must be at once taken to obtain a larger supply. The increase of consumption of water in the city, owing to the continued development of manufactories, is proceeding at a pace which will, within a short period, exhaust the existing supply. If, then, the growth of Manchester is not to be crippled within a near future, additional water must be had. There being no likelihood of obtaining such increase in connexion with its present sources of supply, the Corporation, under the advice of Mr. Bateman, C.E., proposes to have recourse to one of the Westmoreland lakes. Two of these lakes, Ullswater and Thirlmere, lie at an elevation which would admit of water being delivered from them to Manchester by gravitation; and of the two lakes Thirlmere would, according to Mr. Bateman, be the preferable source of supply. From this latter lake, embanked at the outfall to a height of 35 ft., be it said, and forming then a reservoir containing 800,000,000 gallons, 40,000,000 gallons could be drawn for the daily consumption of Manchester, and such other quantity as might be needed for the town of Ambleside and houses and places on Grasmere, Rydal Water, and Windermere. The first cost of works is estimated at £1,700,000, and a period of nine years is stated for completion, including the time to obtain the consent of Parliament.

This project, as might be anticipated, has created much dissatisfaction in the Thirlmere district, and there is little doubt that every effort will be made by the inhabitants of that district to induce Parliament to withhold its consent from it. The objections appear, however, to be chiefly of a sentimental nature.

THRIFT AND THE USE OF ALCOHOL.

MR. G. T. C. BARTLEY, manager of the National Penny Bank, in the course of his remarks, at the meeting of the British Association, on Thrift as an Element of National Strength, gave good advice. Most people when they begin to moralise become unpractical. They advise remedies which are sure to be rejected by those to whom the advice is given. Mr. Bartley is more practical. He remarked that he did not look on the pauperism of this country as a permanent evil, but as one that by judicious legislation could be eradicated. Two things he thought perpetuated pauperism—false charity, and the operation of the Poor Law. But the chief advice for increase of thrift which he gave was that everyone should reduce his consumption of alcohol and of tobacco by half. Had he swept away the whole of these creature comforts, as is the fashion with extreme moralists, nobody would have given attention to his words. As it is, his advice may be acted upon by almost "everybody." The working classes spend an enormous proportion of their wages on drink, making thrift impossible, favouring disease and premature age, and curtailing the supply of sound food. It is a moderate estimate that a working man spends 6d. a day on his own drink, or 3s. 6d. a week. Other classes spend at least twice as much as they should. From a medical point of view, we would hail a movement to urge everybody to aim at reducing their liquor by one half. Sixty millions a year would be saved by this, and an enormous amount of disease would be prevented.

LADY AUGUSTA STANLEY'S MEMORIAL.

No more honourable memento of Lady Augusta Stanley's wise benevolence could be devised than the establishment on a firm basis of her Training Home for Nurses. We sincerely wish the movement the warm support it merits. A thoroughly unsectarian yet earnest effort to train nurses for the sick, not only in hospitals, but private families of the lower middle classes, is much to be desired. Too many of the experts qualified at training establishments are practically useless for service in households where it is impossible to tell off a servant to wait on the nurse. This is a matter of great moment. A nurse should be able and willing to render the special help required without throwing a new burden on the family of the patient. If a better and more workable system can be devised, associated with the name of a lady who was eminently practical in her views and philanthropy, there will be cause for thankfulness, and a graceful act will have been done in memory of one who was greatly beloved and respected.

GENERAL GARIBALDI.

DIRECT news from Caprera enables us to announce that its illustrious occupant has made a more than usually satisfactory recovery from his last attack of rheumatoid arthritis. The General is now entirely free from pain, and can prosecute his favourite studies without fatigue. True to his later proclivities, he dissuades the Italian Government from carrying out its projected fortification of Rome, and, while pointing out that Italy's true defence is her fleet, does not

fail to improve the occasion for driving home a sanitary truth. Disease is the enemy from which Italian cities in general, and Rome in particular, have to be fortified. Let, therefore, the Government, instead of surrounding the great centres of life with trenches and wide tracts of waste ground, which are too often fever-preserves, expend its energy and treasure in making them healthful, attractive, and exhilarating. Let it prevent inundation from the Po or the Tiber, replace the squalid dwellings of the poor by appropriate houses, convert the narrow streets into spacious boulevards lined with the eucalyptus, and encourage the youth of the country in the disciplined use of arms, which, after all, is a nation's best safeguard. Long may the General live to inculcate such salutary lessons!

THE RICHMOND WATER-SUPPLY.

THE Richmond Vestry have showed so much reticence in the information furnished to the ratepayers as to the real position and prospects of the present and future water-supply to the town that the report of Major Tulloch, who recently held a Local Government Board inquiry there, will be looked for with considerable interest. The main points on which the ratepayers appear to have an urgent claim to definite information are the analytical quality of the water derived from the present sources of temporary supply in the Petersham meadow, and the prospects of the new well from which the permanent supply of water is hoped for. With regard to the water sources in Petersham meadow, they were inspected by Major Tulloch, and the distance from the river, the porous nature of the soil through which the water flows, and the fact that the depth of the water in the meadow appeared to vary with the tide, were duly noted. In the course of the inquiry it was elicited that the new permanent well is now sunk to the depth of only 215 feet, scarcely more than half the total depth which the most sanguine anticipate will be necessary. Perhaps the most unsatisfactory of the admissions made by the vestry during the inquiry was that of the 215 feet, the present depth of the well, only ten feet have been sunk during the last four months. Can it be possible that the Richmond Vestry have been recently under the impression that the permanent use of the tidal Thames water from the Petersham meadow would be sanctioned? If so, the sooner they are undeceived on this point the better will it be for the health and the pockets of the Richmond ratepayers.

AMBULANCES.

OUR contemporary the *Metropolitan* again draws attention to the want of ambulances in the metropolis, by reporting a discussion that occurred on the subject at a meeting of the Committee of Works, St George's, Hanover-square, held on the 14th inst. A vast amount of discussion ensued, the burden of the song on the part of the economists being, that as the parish kept an ambulance it was unnecessary for the committee to maintain one. This is the old excuse. The Poor law authorities throughout the metropolis have in most instances some sort of vehicle that does duty for an ambulance, and so is dignified with that name. The Liverpool Fever Hospital has a very convenient vehicle of the kind, which those who are about to purchase ambulances should go and inspect. And we believe that, in accordance with a suggestion that appeared in THE LANCET last year, the Metropolitan Asylums Board have provided, or are about to provide, one of these carriages at each of their hospitals. But the ambulances of the metropolitan sanitary authorities are few and far between. As we have indicated above, they trust for assistance to the union authorities; the carriage is frequently engaged in union work, and the removal of the patient is thus delayed, to the danger of his immediate neighbours. There can be little doubt that the sanitary machinery of a District Board of Works in London is incomplete without an ambulance, and that every board should procure one without further delay.

PUBLIC ANALYSTS.

THE *Surrey Advertiser* of the 18th instant contains an amusing account of a discussion that took place last week at the quarterly meeting of the Borough Council of Guildford. This Council, in common with many other bodies invested with sanitary duties, have not yet thought fit to appoint a public analyst, and were reminded in due course of this default by the Local Government Board. Some members were in favour of appointing a local medical practitioner; others doubted whether they were bound to appoint an analyst at all; a third section thought they had better advertise; and a fourth party advised that the county analyst should be appointed. No one appeared to know what the duties of the analyst were; but after a vast amount of discussion, it was resolved "that the Town Council be requested to ask Dr. Stevenson (the county analyst) upon what terms he would consent to act as analyst for the borough." When will the list of analysts be complete throughout England and Wales?

THE ABERDEEN CHAIR OF PHYSIOLOGY.

THE probable appointment to this chair continues to be a matter of great interest to all concerned in the teaching of physiology in Scotland and to the friends of the two candidates. We have on different occasions set forth very fully their respective claims, and may now leave the matter with the Crown, which should disregard all political considerations, and give the chair to the man with the strongest claims.

MARSHAL MACMAHON.

THE *XIX. Siècle*, commenting on the denial given by an English journal to the statement that Marshal MacMahon is descended from an Irish physician, resident for some time in France, says: "We affirm, without fear of contradiction, or action at law, that Marshal MacMahon, President of the Republic, is the grandson of M. Jean Baptiste MacMahon, Doctor in Medicine of the University of Rheims, who settled in practice at Autun in 1741, and came into considerable property by his marriage."

PRINCE ALBERT VICTOR.

THE symptoms of relapse in H.R.H. Prince Albert Victor's case continued for only five days. We are happy to be able to state that since Friday last, the 17th inst., convalescence has proceeded satisfactorily, and that it is expected the Prince will be able to go to Osborne with his mother on Saturday next.

ON Wednesday, the 15th inst., at the Royal Free Hospital, Mr. William Rose tied the third part of the right subclavian artery, in a man aged forty-two, for axillary aneurism which had been previously treated by digital compression and by galvano-puncture. Up to the present time the case has progressed favourably, and we hope soon to be able to publish its details.

THE Chinese envoys to Great Britain have persuaded their imperial master to issue an edict against opium-smoking throughout China, particularly amongst officials, scholars, and the soldiery. Regulations adapted to local circumstances are to be drawn up in the various provinces to carry out this prohibition, which is to take effect three years hence.

SIR ARTHUR GORDON, Governor of Fiji, is, according to the testimony of a gentleman just returned from our new possession, endeavouring to familiarise the natives with the elements of European medical science. His Excellency has, it seems, induced many thousands of Fijians to submit to vaccination. The practice of the operation on an extensive scale, however, appears to be attended with difficulties, owing to the dearth of medical practitioners, and the scattered position of the inhabitants of the numerous islands forming the group.

THE mortality in London last week was at the annual rate of 19·3, there having been 1309 registered deaths. These included 21 from small-pox, 49 from measles, 24 from scarlet fever, 12 from diphtheria, 18 from whooping-cough, 28 from different forms of fever, and 194 from diarrhœa. The 349 deaths thus comprised in the zymotic class were 117 below the corrected average number from the same diseases in the corresponding week of the last ten years. The births numbered 2611, being 277 above the average.

THE WAR.

THE time is rapidly approaching when the state of health of the armies in the field will occupy a more prominent place in the current news of the war than it has hitherto done. Already we have scattered intimations that sickness is increasing among the Russian forces in Bulgaria, and it is to be inferred that the same is the case among the Turkish forces opposed to them. The armies of both powers in the field are campaigning in districts which have an evil name for malarious disease; and the insanitary condition of the Russian camps on the one side, and the wretched commissariat arrangements of the Turks on the other, must, apart from the influence of locality, ultimately be productive of great mischief to the health of the respective forces. Whether the increasing sickness reported in the Russian army is malarious, or is the result of the neglect of camp hygiene, is not as yet known. Details on this subject are still wanting; for while official returns of the killed and wounded are regularly published, no returns of the sick have as yet come to our knowledge. On the Turkish side even regular returns of the killed and wounded are not made public, and such returns as have been issued with respect to particular engagements appear to be in the main mere guess work. Russian official returns have not hitherto enjoyed a high degree of credibility, but there is ground for the belief that the returns of killed and wounded in the present war are fairly accurate. The latest return to hand refers to the period from the 2nd to the 8th of August inclusive, and gives totals of killed, wounded, made prisoners, and missing as follows: In Europe 5004, in Asia 60; grand total 5064. The general total of killed, wounded, made prisoners, and missing from the beginning of the war to the 8th of August is stated to be 14,459.

Ten additional sanitary railway-trains for the removal of the sick and wounded from the theatre of war into the interior of Russia are in process of organisation. The Minister of War, it would appear, provides the carriages and the interior fittings, the Department of Military Hospitals contributes the accessories and medicaments, and the Society of the Red Cross furnishes the attendants and takes charge of the sick and wounded in transit.

There does not appear to be any diminution of the enthusiastic efforts of all classes of the Russian population to contribute to the efficiency of the voluntary associations formed for aiding the sick and wounded, and the families of soldiers left unprovided for. In addition to helping the armies in the field, nothing would appear to have been omitted from consideration in the operation of these associations which might tend to diminish the evils of the war, as they affect the home population in Russia. Provision is being made not only for the relief of the widows and orphans of those who lose their lives during the war, but also for the families of soldiers who are in active service.

The medical officers of the Russian army are forming a fund for the support of the widows and orphans of their brethren who may be killed or otherwise succumb during the war. The capital is to be formed by contributions on a given scale from the pay, and by a deduction of pay upon appointment.

A recent communication to the Russian journal the *Golos* states that of 200 persons belonging to the Russian Red Cross Society, not less than forty had been killed during the performance of their duties in succouring the wounded and removing them from the field of battle. We apprehend that there must be some error here in the number of killed stated. It seems incredible that so large a loss of life could have been experienced in carrying out this duty at so early a period of the war.

The *Messager Officiel* (Russian) gives a long and interesting account of the medical arrangements made in view of the passage of the Danube at Simnitza. The main facts have been already given in THE LANCET from other sources, but the following interesting information taken from this account is new. The wounds received in the fighting on the right bank of the Danube were very serious. There were numerous cases of gunshot fracture of the arms and legs, nevertheless but two amputations and two resections were made at the principal field hospital in rear of Simnitza, which was under the care of Dr. Obermuller, surgeon to his Imperial Highness the Commander-in Chief, his assistant Dr. Bareskini, Professors Korjenevsky and Bergmann, Surgeons Doukhnovsky, Blumenfeld, and others. Preference was given to conservative methods of procedure, and especially to the use of plaster apparatus for fixing the fractured limbs. By this method of treatment it was found possible to send the patients, after a very brief rest, to hospitals in the interior, and the subsequent progress of the cases is stated generally to have been good.

On the Turkish side, chief interest rests for the moment with the proceedings of the English Associations affiliated with the Red Crescent Society. A correspondent of *The Times*, writing from Adrianople on the 8th inst., gives a very graphic account of the work being done for the relief of the sick and wounded Turks by these Associations. The Stafford House Committee had at that date in work, under the superintendence of Mr. Barrington Kennet, as a special commissioner, seven English surgeons, together with certain local medical men, Greeks and Armenians. Other English surgeons, four or five in number, are on their way to Turkey under the auspices of this Committee. Lord Blantyre, who is a member of the Stafford House Committee, has despatched eight surgeons to the Turkish army at his own cost. Fifteen surgeons are, indeed, now at work with the Turkish forces in Europe and Asia, four in Erzeroum, three in Adrianople, two in Silistria, one on transport duty on the Rustchuk and Varna line, and three in the Shumla-Razgrad district. Hospitals have been established by the Stafford House Committee at Rustchuk and Varna, and handed over to the Red Crescent Society, which will bear the expense of working them.

The British National Society for Aid to the Sick and Wounded has seven surgeons at work, distributed as follows: — Two with the army of Suleiman Pasha in the Balkan districts; two at Varna, who will join the staff of Mehemet Ali Pasha, the Commander-in-Chief; two at Batoum; and one who will probably remain on board the Society's ship, the *Belle*, of Dundee. Mr. Young, the agent of this Society, in a recent report of his proceedings, published in *The Times*, shows most excellent work done in the relief of the Turkish forces on the shores of the Black Sea, especially off Batoum and Soukhoum Kali.

In our last impression we referred to a charge of partiality brought by several influential persons against the National Aid Society in the distribution of its funds and stores. The Society has published a detailed answer to the charge, which we think fully answers the allegation and justifies the course of action it has taken.

The Red Crescent Society—the Ottoman society for the relief of the sick and wounded—would now appear to have got into vigorous action. The Sultan, who has contributed £2500 to the Society, is said to take great interest in its operations. It has now to its credit £16,000, chiefly con-

tributed by the Mussulman population of India. In addition to sending extensive supplies of hospital stores to the armies in the field, it is constructing two large hospitals, one on the Bosphorus, and the other on the Dardanelles.

Correspondence.

"Audi alteram partem."

"HOSPITAL MORTALITY."

To the Editor of THE LANCET.

SIR,—Before closing your columns to the correspondence on "Hospital Mortality," will you allow me space to offer a few personal explanations which I would have done before had I not been absent on my usual holiday? With the remarks in your leading article I have no fault to find; they set forth many of the numerous difficulties which beset the question of hospital death-rate when it is employed by incompetent observers as a test of the sanitary condition or unhealthiness of a hospital; but I protest strongly at the construction which some of your correspondents have sought to put on my figures, and in fabricating statistical fallacies from them, without having consulted the original work. Had Dr. Greenfield, in his laudable attempt to uphold the credit of St. Thomas's Hospital, by accounting for its exceptionally high mortality, only taken the trouble to refer to my tables, and the remarks appended to them, he would have found that my experience closely coincided with his own, and that so far from assuming that a high death-rate involved an element of censure in the vital activity of a hospital, there are numerous reasons why it should be looked on as a proof of its satisfactory management. In the case of St. Thomas's Hospital the high death-rate is partly explained by the fact of the new hospital having broken fresh ground in its recent exodus to Lambeth, where the demand for its services happens to be greater than its restricted accommodation can supply, though I believe the main factor may be traced to the small number of beds used for ophthalmic, venereal, and other diseases attended with a low rate of mortality, when compared with the corresponding accommodation at Guy's and St. Bartholomew's, and at some other hospitals. When Dr. Greenfield charges me with misrepresenting the number of beds at the disposal of St. Thomas's, I have an equally strong ground of complaint. The column in my table from which you have deduced the relative hospital activity purports to give only the number of available beds in each of the institutions referred to, and not the number of beds in continuous occupation. Now, everyone acquainted with hospital matters in London knows that the new St. Thomas's was built to accommodate 600 patients, and estimates which are freely made as to the cost of the building are invariably based on this supposition; but lest exception should be taken to the number, I made the necessary inquiries in official quarters, and found that the total number of beds did not exceed 573, which I was bound to credit the hospital with in my table. By reducing this number to 400, or rather to 370, Dr. Greenfield alters materially the basis on which your estimates of relative activity have been made, and consequently invalidates the whole inquiry. At the same time it would be easy to show that the beds in Guy's or Bartholomew's are nearly if not quite 100 in excess of those in constant occupation, but although vacated for sanitary and for other equally important reasons, they are not the less available should any contingency arise to require their employment. But in truth estimates of hospital activity, though important in the highest degree, must be received with the greatest caution, since no two institutions are governed by the same well defined laws, while each preserves some special characteristics dependent on a variety of causes, which it would be necessary to specify in detail, in order to arrive at even an approximate estimate of their value.

For these reasons, notwithstanding the strong temptation to the contrary, I have studiously avoided any reference to the question so freely discussed in your columns, preferring rather a simple, consecutive record of facts obtained from trustworthy sources, to "the masses of crude figures" from which Dr. Greenfield has chosen to construct his statistical fallacies, and Mr. McGill, F.R.C.S., to convert into a ridiculous, if not mischievous, indictment against our improved systems of nursing the sick. As some doubt has been thrown on the accuracy of these figures as regards St. Thomas's and Bartholomew's, I may be allowed to state that the tables have been carefully prepared from the official records of both hospitals, and I embrace the opportunity of thanking Mr. Walker and Mr. Cross for their courtesy in allowing me to have free access to them. The tables relating to St. Thomas's Hospital are, I think, especially valuable, as they comprise a consecutive series of annual returns dating as far back as 1734, with a sexual mortality from 1786, and a medical and surgical mortality for the past twenty-six years. Although it appears probable that many of my conclusions are at variance with Mr. Tait's (for I have not yet had the pleasure of reading his book), I fully endorse his protest against being subjected to criticism by parties who have failed to consult his work, and have contented themselves with a few stray figures, which may be construed to mean anything or nothing.

I am, Sir, yours, &c.,

Guy's Hospital, 21st August, 1877. J. C. STEELE.

To the Editor of THE LANCET.

SIR,—In a letter in your columns last week, Mr. Lawson Tait challenges me to substantiate my statement that a large proportion of what he considers excessive hospital mortality is unavoidable. It will give me great pleasure to do so when I have had time to collate the facts and you will allow me a few spare pages of your journal for the purpose of stating them. At present I wish only to observe that my statement as to the mortality in large hospitals was grounded upon personal observation, not merely on figures from reports, and that they referred to *total* mortality, and not, as Mr. Tait seems to have concluded, to deaths after amputation only.

I must apologise to Mr. Tait if I have in any way misrepresented or misstated the character of his book, but I need hardly state that I should not have ventured to criticise it without reading enough of it to form a fair estimate of its contents. The tables to which I made reference as "masses of crude figures" (or "crude masses of figures," if Mr. Tait prefers), and to which in the main my strictures were intended to apply, occupy twenty-six pages near the beginning of the book, (p. 17, *et seq*.) To these tables, I must again contend, my remarks are strictly applicable, nor has Mr. Tait given any adequate defence of them. On the contrary, he accepts my view "that mortality statistics, to be of any value, must be grounded upon the comparison of a series of cases of a similar nature." Since he recognises the valuelessness of these tables, it is to be regretted that he should have seen fit to publish them, and should still make statements grounded upon them, such as that "these results are found to coincide with a death-rate in the total patients passing through its [i.e. St. Thomas's] wards nearly double that of Leeds."

There is one sentence in Mr. Tait's book which makes me fear that any effort to convince him by reasoning or demonstration will be hopeless, and since, although you have challenged him for proof, he still holds to the accuracy of his view, I scarcely hope to convince him that he is in error. Speaking of St. Bartholomew's and St. Thomas's he says, "*a priori* there seems no reason why there should be such a great difference in the death-rates of the two hospitals. If the death-rate of St. Thomas's was as low as that of St. Bartholomew's, 220 valuable lives would be saved every year." Now if this is anything but a rhetorical flourish, and I take it that Mr. Tait means it literally, he asserts that about 220 patients die every year in St. Thomas's from preventable causes, and their deaths are chargeable either to neglect, maltreatment, or to "hospitalism." Now, let us see what this means by a reference to facts. In the year 1873, as Mr. Tait will see by referring to the St. Thomas's Hospital Reports for 1874, there were 174 deaths in the medical wards, and 151 in the surgical wards, making a total of 325. If we subtract from these

the 220 preventable deaths, there remain 105 to be put down as due to natural causes, inevitable in fact. It is to be presumed that Mr. Tait allows that certain diseases are of necessity ultimately fatal. It is not necessary to take diseases which are absolutely fatal in a short space, as to do so would load your columns with figures. But I will take diseases which are either necessarily fatal, or of which there are sufficient details given in the report to enable Mr. Tait to judge of the prospects of recovery. He will find that in the medical wards alone there died of

Meningitis, cerebral hæmorrhage, and tumour	19
Phthisis	23
Heart disease	35
Bright's disease	25
Cancerous and other malignant growths ...	7
Total	109

As of nearly every individual case of these diseases some details are given in the Reports, it will be easy to show whether my statement is accurate that these deaths were unavoidable. Hence the astonishing conclusion that every death in the surgical wards during that year was preventable, and nearly 40 per cent. of those in the medical wards. Or, in other words, that fractures of the skull, smashes, wounds, and operations of all kinds, cancer, &c., are curable if only "hospitalism" is excluded. Until Mr. Tait withdraws this statement he cannot expect that anyone will attach much value to his "facts" or "arguments," or consider them worthy of refutation.

I will now refer to the only tables in Mr. Tait's book which can pretend to any scientific value—viz., those towards the end, entitled "Amputation Mortality." I shall not enter into the question of the mortality after amputations at St. Thomas's Hospital, for upon that point I cannot speak from experience. I will merely point out that if one-half of those operated on primarily for accident every year died, there would be just 4·8 deaths a year from that cause, if Mr. Tait's tables are correct. And yet this is the main ground on which he founds his serious charges against St. Thomas's. Why does not Mr. Tait take some other serious operation, such as excision of the knee, for comparison. In the years 1872–4 inclusive 53 such excisions are stated to have been done, 14 with a fatal result, 2 of them from general tuberculosis. Still, taking the whole, the mortality is only 26·4 per cent.

I shall not here further discuss this subject, but point out one or two sources of fallacy which Mr. Tait has overlooked. In comparing the results of any operation, it is surely desirable that all source of error should be, as far as possible, eliminated. Now, in comparing the results from the eight hospitals given in the table, one fact is very striking—viz., that the highest mortality is in hospitals which have the smallest number of operations. Did it ever occur to Mr. Tait that the constitution and age of the patients have something to do with the result of an operation? In a manufacturing town, such as Mr. Tait states Leeds to be, and where the number of primary amputations is very large, a considerable number must be upon young and healthy persons injured by machinery accidents, whereas in London many of the accidents occur either in intemperate persons, often as a result of intemperance, or in the feeble and aged. Moreover, the margin of chances of recovery evidently rises with the larger number of cases taken. But let me give an instance from another disease, which shows how great care is needed before attributing to "hospitalism" a high mortuary rate.

In 1873, 48 cases of enteric fever were under treatment in St. Thomas's Hospital, of whom 2 died, or 4·16 per cent.; in 1874, 39 cases, of whom 9 died, or 23 per cent. Now these cases were nearly all under my personal observation; the care and treatment bestowed upon them were the same, and so were the wards. I have, in the Report for 1875, endeavoured to show the grounds of this difference, and will not here detail them, only observing that they depended on the condition of the patients and of their admission to the hospital. Now let us suppose that instead of in St. Thomas's the cases during 1873 had been treated, say in Leeds Infirmary. The argument drawn on Mr. Tait's model would run thus: "The mortality from enteric fever in Leeds Infirmary is only just over 4 per cent., whilst in St. Thomas's it is 23 per cent., so that if 500 cases of the disease were treated in the former hospital 20 would die, in the latter 115. But the mortality in enteric fever at Leeds shows it to be a highly curable disease, and the fatal results in St. Thomas's must be due, therefore, either to hospital defects, or to neglect and malpraxis. And seeing that a large number of other diseases are equally or more curable, we must assume that 7 out of every 10 patients who die in St. Thomas's die from similar preventable causes." Yet here there is no mixing up of different classes of disease under different conditions to disturb the comparison.

I must apologise for occupying so much of your space in criticising statements which are hardly worth serious attention, were it not for the gravity of the reckless charges which they contain. The whole subject of hospital mortality has been very fully discussed years ago, when Dr. Farr, Dr. Richardson, and Miss Nightingale, made charges equally grave, and supported by better arguments than those of Mr. Lawson Tait. Those who are interested in the subject will find both in your columns and in those of the *Medical Times* of 1864, a discussion between Dr. Farr and Dr. B. W. Richardson on the one side, and Dr. Bristowe and Mr. Holmes on the other. The controversy was terminated by a masterly letter from Dr. Bristowe in the *Medical Times* for April 30th, 1864, to which Dr. Farr seems never to have ventured a reply. Had Mr. Lawson Tait really read and mastered this correspondence, and the Report on Hospitals by Dr. Bristowe and Mr. T. Holmes, to which he makes frequent reference, he would not have wasted his time in compiling a mass of useless tables, and making ingenious speculations on them.

In conclusion, let me point out that there is one method by which some valuable conclusions may be gained as to hospital hygiene. It is to show, in individual cases, that the death was due to preventable causes. Let each case of a particular disease or injury be separately considered, all disturbing causes, as shown by the symptoms and the post-mortem, be eliminated, and let it be proved that of such cases a number die under given circumstances who should recover, and a serious ground for urgent attention and reform will be established. The materials for this analysis exist to a large extent in the annual reports of the larger London hospitals, and would, I believe, be willingly supplemented by the hospital authorities if the task were undertaken in an impartial and scientific spirit.

I am, Sir, yours very truly,

Wimpole-street, August 20th, 1877. W. S. GREENFIELD.

To the Editor of THE LANCET.

SIR,—I am obliged again to correct an error into which you have fallen from your not having considered the headings of my columns sufficiently closely with the context. The figures, taken from Churchill's Directory, are confined entirely to the number of beds which the authorities of each hospital stated it to possess. I employed them in order to arrange the hospitals according to size, and also to display the remarkable tendency to exaggeration which hospital management seems to induce. In no other direction am I content with the figures in the Directory.

I never asked for the reports of St. Bartholomew's Hospital, because I had them, and therefore the name of that hospital has not an asterisk before it. But you are not entitled to say that is amongst the institutions marked as those from which no reports were received, and to presume from that that its reports were unknown to me.

Your method of expressing the "activity" is entirely fallacious, because it is based upon not only an unknown but an assumed, and, in many instances, an absolutely false quantity. My method of calculating it as the daily population of each hospital throughout the year is the only one which will satisfy the statistician.

I am, &c.,

August 20th, 1877. LAWSON TAIT.

To the Editor of THE LANCET.

SIR,—As Dr. Bristowe has, in THE LANCET of to-day, misrepresented—no doubt, unintentionally—my letter which appeared in your issue of August 4th, I should feel obliged if you would allow me space for a few words in reply. Dr. Bristowe says that I assume King's College, University College, and St. Thomas's Hospitals are the most unhealthy o

the metropolitan hospitals. If he refers to my letter, he will find that I assume nothing, but state the fact that these hospitals have the highest mortality. He next states that the nursing at St. Thomas's is not conducted on the Nightingale plan ("system" would, perhaps, have been a better word); but, as he also professes ignorance of what that system is, it would be advisable for him to study Miss Nightingale's most excellent work on the subject before venturing on a statement on a matter upon which he is apparently ill-informed. Again, he makes it appear that I think that good nursing in hospitals tends to raise their mortality, whereas I rather inferred that bad nursing raised, while good nursing lowered, the death-rate.

Dr. Bristowe and Dr. Greenfield both agree that the exceptionally high death-rate at St. Thomas's can be accounted for by the small size of the hospital. It almost makes one smile to find that a hospital with 576 beds, 400 of which are in constant use, is termed small, and placed in the same category as regards size with hospitals with 172 and 154 beds respectively. "Statistics are," as Dr. Bristowe says, "wonderful things, and prove a great deal, but I think that most people will require more proof than he adduces to convince them" that the high death-rate at St. Thomas's is due to the small number of beds which the staff have at their disposal. If it be true the death-rate ought to vary inversely as the size, why should University College, with 154 beds, have a mortality of only 11·46, while St. Thomas's with 400 reaches to 11·73? My explanation of the high mortality may be wrong, very probably it is, but it is not so palpably absurd as that adopted by Dr. Bristowe. Perhaps on further consideration he will be able to discover some other cause for a state of things which I still consider eminently unsatisfactory.

I am, Sir, your obedient servant,

Park-square, Leeds, August 11th, 1877. A. F. MCGILL.

ON THE CONNEXION BETWEEN MEASLES AND ROTHELN.

To the Editor of THE LANCET.

SIR,—My friend, Dr. Sharkey, published in your columns a few weeks since, a striking case which occurred in my practice, showing the non-identity of chicken-pox and small-pox. Dr. Farquharson, whose paper, read before the Clinical Society, induced Dr. Sharkey to write to you, acknowledged in your issue of the 21st ult. the importance of Dr. Sharkey's case in reference to the question then under dispute, but incidentally maintains in his letter that there is a similar identity between roseola, or spurious measles or rötheln, and true measles, to that which he still seems inclined to think exists between varicella and small-pox.

I freely acknowledge the very great resemblance there is between measles and rötheln, and that I would by no means undertake in every instance to distinguish a case of the one disease from a case of the other; but close resemblance does not necessarily imply identity, and, for my own part, having seen a great deal of both diseases, I have no hesitation in ranging myself with those who maintain their absolute distinctness from one another, and, in confirmation of my opinion, beg leave to lay before your readers the following two narratives:—

(1) A little more than nine years ago, all my children then born, seven in number, had measles, which was introduced among them by my eldest boy, who had contracted it at a public school to which I was physician, and where I had therefore full opportunity of observing the course of the epidemic. Four years ago this summer, while at the seaside, my eldest two daughters were attacked, within a week of one another, with what I regarded as rötheln in a well-marked form. It did not spread from them to any other of my children, although at that time two others had been added to their number, and these two had never had measles. About fifteen months ago, one of the two children who had not hitherto had measles, and who had been exposed to the contagion of rötheln, were brought into relation with the poison of measles and contracted the disease.

(2) Three years ago last Christmas, five of the children of a near relative of mine had measles in a characteristic form. In the following March, the resident governess, who had been exposed to the contagion of measles at Christmas, but had not become affected by it, had a well-marked attack of rötheln, and a week or ten days afterwards one of the children, who had had measles three months previously, had also an attack of rötheln. The disease did not extend. I attended the family on both occasions.

These narratives seem to show two things—namely: 1st, that rötheln and measles are not mutually protective, as they should be if they were mere modifications of the same disease; and, 2nd, that rötheln is not nearly so contagious as measles. I may add that I have witnessed many other outbreaks of rötheln besides the above, and that the distribution of the disease has, as far as I could learn, in no case been influenced by the previous occurrence of measles.

It seems to me that the grounds for maintaining the non-identity of measles and rötheln and of small-pox and chicken-pox, respectively, are quite as strong as those on which we maintain the non-identity of measles and scarlet fever, which were confounded with one another by the physicians of the last century; or as those on which we assert the non-identity of typhus and enteric fever—diseases which Dr. Stokes still contends to be one and the same. The mere fact that sporadic cases of one infectious disease are met with during the epidemic prevalence of another infectious disease is no more a proof of their common origin, than the fact of patches of oats or barley being discovered in a field of wheat is a proof that those cereals all spring from the same seed. Dr. Farquharson must therefore forgive me if I put another interpretation than his upon the statement made in his letter, that "roseola, or spurious measles, will reproduce itself in its own kind fifty or sixty times; and the sixty-first may, as I have seen, turn out to be a true case of the major disease."

I am, Sir, your obedient servant,

Old Burlington-street, August 11th, 1877. J. S. BRISTOWE.

"A POCKET INSULATED SURFACE THERMOMETER."

To the Editor of THE LANCET.

SIR,—Allow me to state in your columns that the surface thermometer, described in THE LANCET of August 11th, is, in its essential feature—i. e., the spiral bulb partly surrounded by a metallic cup—identical with the surface thermometer devised by myself some six years ago, and since then frequently used by me in the wards of the Westminster Hospital.

The thermometer has also been manufactured and sold by Mr. T. Hawksley, 300, Oxford-street, for several years past. It has been exhibited by him at the last of the annual International Exhibitions held at South Kensington, at the exhibition of scientific instruments at the same place last summer, and on various other occasions.

On applying this thermometer to surfaces of known temperature within the range of temperature of the human body, I found that, after five minutes' contact, the temperature indicated by the thermometer is, within from a quarter to one-fifth of a degree Fahrenheit, the correct temperature of the surface.

Yours, &c.,

Westminster Hospital, August 21st, 1877. A. DUPRÉ.

We have communicated with Dr. Mortimer Granville, and the following is his reply:—

To the Editor of THE LANCET.

SIR,—I am obliged for the private communication with respect to Dr. Dupré's letter which is to appear in THE LANCET this week, and for the sight of his instrument.

It is obvious that Dr. Dupré has anticipated me in the adoption of the principle common to both instruments. The great feature in which mine differs from his—and this, I think, makes all the difference between a "pocket" thermometer and one which can scarcely be so designated—is that I have suspended the glass tube by an india-rubber washer, and arranged the register horizontally, so that the apparatus packs in a very small compass. The ordinary difficulties attending the use of a horizontal scale have been surmounted, and the makers guarantee the perfect accuracy

of the instrument. It has been subjected to severe tests, and answers the purpose completely. Until the matter was brought under my notice by Dr. Dupré's letter, I had not the slightest notion that a thermometer resembling my own had been constructed; and I think that gentleman will concede to me that, while undoubtedly before me in applying the principle of insulation, he has not brought his instrument into a form which renders it suitable for general use in clinical practice. In saying this, I do not for an instant wish to detract from the merit of the conception, to which he has a prior claim.

Will you allow me to say that I anticipate some new clinical results from the use of my instrument as a spiro thermometer. When held about an inch from the patient's mouth, the mercury rises with each expiration and falls with each inspiration, until, like a tidal wave, gaining something at each advance, it reaches the mean temperature of the breath, after which it rises and falls with every respiration, the time occupied and the length of the oscillation indicating the manner in which the lungs act. I believe it will be found that it is by this instrument possible to ascertain the temperature of the breath without taking that of the mouth, which may be determined by local conditions.

I am, Sir, yours obediently,

Euston-square, Aug. 23rd, 1877. J. MORTIMER GRANVILLE.

PROPOSED IRISH GRADUATES' ASSOCIATION.

To the Editor of THE LANCET.

SIR,—In pursuance of the notice kindly published in THE LANCET of August 4th, a meeting of medical men practising in England and holding qualifications from various licensing bodies in Ireland, was held, and was largely attended. It was unanimously resolved that it was desirable to form the proposed association, and Dr. Balthazar Foster, of the General Hospital, Birmingham, was chosen first President, and Dr. Daniell, 20, Cathcart-road, West Brompton (for London), and myself (for provinces) as the Secretaries. The Association arranged that the first annual meeting should be held in the town at which the meeting of the British Medical Association is to be held next year.

As soon as possible copies of the proceedings at the meeting at Owens College will be forwarded to all practitioners in England holding Irish degrees or diplomas. In the meantime, such gentlemen as desire to join may forward their names to either of the secretaries named. The annual subscription was resolved to be 2s. 6d.

Your insertion of this in the next issue of THE LANCET will oblige, yours faithfully,

JAMES THOMPSON, M.D., Hon. Sec.

Avenue House, Leamington, August 18th, 1877.

THE ASTLEY COOPER PRIZE.

To the Editor of THE LANCET.

SIR,—As a candidate for the above prize I cannot feel that I have been fairly dealt with in the late award. The prize has been awarded, as announced in your last issue, to Drs. Eulenberg and Guttmann. Thus it is evident that these two gentlemen have been working for this prize in partnership.

The notice which I received, on application at Guy's Hospital, relative to the subject of the essay, states as follows:—"The next triennial prize of £300, under the will of the late Sir Astley Cooper, Bart., will be awarded to the *author* of the best essay or treatise, &c." Among the annexed conditions extracted from the will, it is stated that the interest in the drawings, preparations, and essay itself "shall be relinquished and transferred by the successful *candidate*" in favour of the museum of Guy's Hospital. The notification further states "that each essay or treatise shall be distinguished by a motto, and be accompanied by a sealed envelope containing the name and address of the *writer*."

In the above extracts the italics are my own. They serve to show that it was evidently the intention of the testator that the essays should not be written by more than one author, as in every case, where referred to, the author or candidate is spoken of in the singular number. It is evident that, in a case like this, two heads must be better than one; indeed, the work might be divided *ad infinitum*. Had I known that such partnership was allowable, I should certainly never have tried single-handed.

I cannot afford to contest the matter at law, more particularly as in any case my own chance of obtaining the prize is, I must confess, very small. It must, however, be admitted that the result is highly unsatisfactory, and does not redound to the credit of the physicians and surgeons of Guy's Hospital.

I am, Sir, your obedient servant,

London, Aug. 23, 1877. AN UNFAIRLY-TREATED CANDIDATE.

*** Our correspondent's complaint is not unreasonable. Some explanation is due to the public and the profession on this subject. At the very least it should be made clear, in future, that workers may combine or co-operate in competing for this prize. Is it to be understood that any number may combine—that a sort of company may be formed for taking a prize? This does not seem to have been in the mind of Sir Astley Cooper.—ED. L.

LAMBETH INFIRMARY.

To the Editor of THE LANCET.

SIR,—In connexion with the question of the mortality in the Queen Charlotte's Lying-in Hospital, the following figures relating to the deliveries which have taken place in this institution since Jan., 1870, may prove of interest:—

Year.	Deliveries.	Deaths.
1870	212	1
1871	197	1
1872	168	0
1873	173	2
1874	177	1
1875	155	4
1876	139	2

I must here mention that the building is a very old one, so ill-suited to the requirements of a hospital that the authorities are building a new one, which is expected to be opened in a few months.—Yours, &c.,

ROBT. H. LLOYD, M.D.,
Medical Superintendent.

Prince's-road, August 21, 1877.

PARIS.

(*From our own Correspondent.*)

INAUGURATION OF THE NEW HÔTEL DIEU.

ON Saturday, the 11th instant, Marshal MacMahon inaugurated in great ceremony the new Hôtel Dieu. Two days before, the patients had been transferred from the old building to the new one, and everything was arranged for the visit of the President of the Republic.

At one o'clock, the Marshal, accompanied by several of his staff, drove up to the principal entrance, where he was received by MM. Duval (Prefect of the Seine), Voisin (Prefect of Police), Nervaux (Director of the Assistance Publique), Alphaud, Ansart, Isnard, and several other distinguished personages belonging to the Assistance Publique or the municipal bodies. The Marshal was then taken to the Salle Landry, where all the medical officers of the hospital had gathered to meet him. The surgeons of the hospital were MM. Richet, Cusco, and Guérin; the physicians, Drs. Noel Guéneau de Mussy, Sée, Fauvel, Oulmont, Frémy, and Hérard. Near these were the twenty-three house-surgeons and physicians of the hospital, with their traditional white aprons, and also the sisters of mercy and other assistants—in all about 200 people.

Several wards were successively visited, all looking very cheerful and gay with their freshly painted walls and white curtains. The Marshal was in charming humour, and as he went along gave a cheerful nod or word to the patients, and chatted familiarly with the medical heads of the wards. To Dr. de Mussy, who had once attended him for a cold, for which rest was especially ordered, he related that he

had got cured of it by hunting a stag and falling accidentally into a frozen river. Dr. Guéneau de Mussy's rejoinder was: "Hydropathy." With Dr. Sée he entered into a conversation about salicylic acid and its effects, about which he had heard so much.

All the various rooms and architectural arrangements were visited one after the other—the chapel, the linen-rooms (where the Marshal complimented most warmly the sisters of mercy), &c. On returning to the ground floor in the central courtyard the windows all round were to be seen crowded with the patients and other visitors anxious to have a look at the proceedings, and the appearance was rather picturesque and pleasant. The underground arrangements were next visited, the Marshal appearing very much interested in the immense machinery intended to warm the vast edifice, or furnish water or other necessaries. The cooking department was lastly visited. There the architects of the building and an engineer who had contrived a new steam apparatus for this department were in attendance, and explained the working of it to the visitors. The Marshal then tasted the *bouillon*, which he declared excellent, and after a visit which had lasted about two hours he left the Hôtel Dieu amidst the cheers of a large crowd which had gathered.

PROFESSIONAL NOMINATIONS.

By a decree dated August 17th, and previously submitted to the approval of the Superior Council of Education, the following professors have just been nominated to the new School of Medicine of Lyons:—MM. Berne, Surgical Pathology; Boudet, Medical Pathology; Leon Tripier, Surgical Operations; Pierret, Morbid Anatomy; and Artaud, Mental Pathology.

Obituary.

DR. CHARLES DALGAIRNS.

THERE are few old King's College men of the years '44, '45, '46, who will fail to remember Charles Dalgairns, so well known was he by his fellow-students for his ever cheery spirit and genial presence. He was one of three brothers—the late Father Dalgairns, the distinguished Romanist, being the eldest—and born in Guernsey; was educated at King's, and became a favourite pupil with the late Sir William (then Mr.) Fergusson. He settled in practice in Essex, and having remained there for some years, went with his family to America, and during the time of the great Civil War he espoused the cause of the North, became attached to Sherman's army, and was on the staff of that General as one of the medical officers during his celebrated march. He was exposed to much hardship, which laid the foundation of the disease that ultimately destroyed him. After remaining in practice for some years his health broke down, and he was advised to return to England. In the year 1874 he took up his residence at Westgate-on-Sea, where the bracing air and rest restored him to such an extent that he was enabled for a period of two years to practise his profession; but about a year ago returning symptoms of his old malady—softening of the brain—appeared, and he gradually declined in health until death took place on the 25th ult. He was most assiduously attended by his friend, Dr. Smith Rowe, during the whole of his long illness. Charley Dalgairns, as he was called at King's College, will be long remembered by his old fellow-students, and his memory will be deservedly cherished.

HENRI CONNEAU, M.D.

AN interesting specimen of what may be called the diplomatic physician has just passed away. Born at Milan, of French parents, on the 3rd of June, 1803, Henri Conneau adopted the healing art as his profession, and after having acted as secretary to King Louis of Holland, he attached himself as family physician to the household of Queen Hortense. He thus became associated with the then seemingly desperate fortunes of Louis Napoleon, with whom he shared the vicissitudes of cloud and sunshine, till he was arrested along with his young master in the affair of Boulogne, on which occasion he begged as a particular favour to share his cell, and so was instrumental in effecting the famous escape from the fortress of Ham. On the re-establishment of the Empire, Dr. Conneau, who had continued to be the body physician of the Prince, received the special honour of ranking as first physician to the Emperor. In 1852 he was returned to the Corps Législatif by the third conscription of the Somme as government candidate, and re-elected, under the same title, in 1857 and 1863. On these latter occasions the votes in his favour were 20,355, out of a total of 25,079. By a decree of the 18th of November, 1867, he was named Senator. Decorated in February, 1849, he was promoted on the 16th of March, 1856, to the rank of Commander of the Legion of Honour, and to that of Grand Officer on the 7th of August, 1867. Dr. Conneau was also nominated a member of the General Council of Corsica for the Canton of Bastia, and member of the Imperial Academy of Medicine.

Such are the external facts of a career which was spent in the *vie intime* of a great historical house. The shrewd deputy, the grave and thoughtful senator, the genial yet reserved *habitué* of imperial salons, was known to all. But to how few was known the wise and faithful counsellor of a royal master, fallen and in exile; the devoted and truly "beloved physician" of the imperial widow and orphan? The time is not yet ripe for a full memoir of the life of Henri Conneau; too many state secrets are involved in its vicissitudes for these to be lightly handled by contemporary journalism. But it can never be premature to state, and we of THE LANCET, remembering as we do his services to us in chronicling the visitation that befell the château at Chislehurst on the 9th of January, 1853, can state it with truth, that a more upright and honourable man never devoted himself to the medical art, and that to find his superiors in the accomplishments of a court physician we must go back to the Lancisis and Arbuthnots of an earlier age.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine and received certificates to practise on the 16th inst.:—

Battle, William Henry, Potter Hanworth, Lincoln.
Bunting, Robert Obadiah, West-green-road, Tottenham.
Chadwick, John, Milnrow, Rochdale.
Cocksedge, Charles Ernest, Clapton-park.
Greasley, John, Canterbury.

The following gentlemen also passed the Primary Professional Examination:—

Maurice Edward Ling, London Hospital; Herbert Francis M. Pope, St. Bartholomew's Hospital; Richard Weddall Thomas, St. Thomas's Hospital; George Underhill, Middlesex Hospital.

At the recent examination for the prizes in Botany given by the Society of Apothecaries the successful candidates were as follows:—

1st.—Arthur Henry Shakspere Lucas, London Hospital. A Gold Medal.
2nd.—Sydney Harland Henty, University College. A Silver Medal and a Book.
3rd.—Charles Purdy Lukis, St. Bartholomew's Hospital. A Bronze Medal and a Book.

THIRTY candidates were passed at the late examination for the British Army Medical Service.

DR. JOHN GILL, of Wem, is a candidate for the coronership of the district of North Bradford, Salop, vacant by the death of J. A. Walmsley, M.R.C.S. Eng.

DR. MAY, of West House, Maldon, has been appointed a Justice of the Peace for the county of Essex.—Dr. G. B. Barron, of Summerseat, Southport, has just been made a Justice of the Peace for the county Palatine of Lancaster.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—It is stated that upwards of 400 candidates have entered their names for the preliminary examination in Arts, &c., for the diplomas of Fellow and Member of the College, which will take place early in September, at Burlington House. The annual registration of gentlemen pursuing their professional studies at metropolitan and provincial schools has not been, as was generally expected, abolished, but will take place, as usual, in October.

AT a meeting held in the Grand Jury Room, Derby, the Mayor in the chair, it was unanimously resolved to establish a Hospital for Sick Children. A very influential committee was appointed to carry out the scheme, and numerous offers of pecuniary support were made.

THE "Dundee Advertiser" announces that the following gentlemen have been appointed as the Royal Commission to inquire into the law affecting grocers' licences in Scotland:—Sir James Fergusson, Bart., Messrs. Archibald Campbell Swinton, Peter Maclagan, M.P., J. A. Crichton (Sheriff of Fife), and William Fergusson, of Kinmundy.

VACCINATION GRANTS.—The following gentlemen have received from the Local Government Board awards for efficient vaccination in their respective districts:—Mr. E. M. Owens, Farleigh, Kent, £8 11s. (third time); Mr. Peter Swales, Sheerness, £29 10s. (third time).

BEQUESTS, &c., TO MEDICAL CHARITIES.—The Royal Albert Edward Infirmary and Dispensary, Wigan, and the Manchester and Salford Lock Hospital have each received £1000 under the will of Mr. W. J. Rideout. The East Suffolk and Ipswich Hospital has received £270 under the will of Mr. John Boston. Messrs. Drummond and Co. have given £200 to the Charing-cross Hospital extension fund.

QUEEN'S COLLEGE, BELFAST.—The report for the past session is an encouraging one, there being an increase of 44 students in attendance over that of the preceding year. The President, in his report, draws attention to the question of intermediate education in Ireland, and expresses a conviction that the want of preparatory schools established throughout Ireland, on some principle, is prejudicial not only to collegiate and university education, but to the public service itself, which has placed competition on so wide a basis, and offers high rewards to successful candidates.

ROTUNDA LYING-IN HOSPITAL, DUBLIN.—The annual report for 1876 of this institution, the largest of its kind in Europe, shows that 1047 patients were delivered in the hospital during last year; of these 59 were delivered by the forceps, 11 by version, and 1 by the cephalotribe. The forceps was applied 59 times, or once in about every 18 cases. The mortality amounted to 35, a very high death-rate, but which the master explains by the institution being the great refuge for the very poor and wretched, the majority of whom are unmarried, or deserted by their husbands. Dr. Atthill observes that the great majority of the fatal cases recorded were due to septicæmia. A case of double vagina, with single uterus, was admitted into the auxiliary hospital.

Medical Appointments.

ALCOCK, D. E., L.K.Q.C.P.I. & L.M., M.R.C.S.E., has been appointed Medical Officer to the Post-office and Telegraph Department, Waterford, vice Donovan, appointed Medical Officer for No. 4 District of the Ashby-de-la-Zouch Union.

BROOME, S. B., L.F.P.S.G. & L.M., L.S.A., has been appointed Colonial Surgeon to District No. 5, Presidency of Antigua, Leeward Islands.

BROWN, G. A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Tredegar Urban Sanitary District for five years, at £50 per annum.

DAY, A. B., M.R.C.S.E., M. & L.S.A.L., has been appointed Medical Officer to the Brentford Union Workhouse, vice Davies, resigned.

ENSOR, J. A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Workhouse and the Tisbury District of the Tisbury Union, vice Green.

FAUSSET, H. J., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Tamworth District and the Workhouse of the Tamworth Union, and Medical Officer of Health for the Tamworth Rural Sanitary District, vice Brunton, resigned.

FRANKLIN, A. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Hednesford Colliery, Hednesford, vice Suffield, deceased.

GOODALL, J., L.R.C.P.I., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the No. 6 District of the Lincoln Union, vice Sealy, resigned.

HARVEY, Mr. S., has been appointed Public Analyst for Folkestone, Kent.

MACKINTOSH, A., M.D., L.F.P.S.G., has been reappointed Medical Officer of Health for the Brampton and Walton Urban Sanitary District, Derbyshire.

MAY, H., L.R.C.P.I., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the No. 3 District and the Workhouse of the Ware Union, Herts, vice Bate, resigned.

MAYBURY, W. A., M.D., M.R.C.S.E., L.S.A.L., has been appointed Medical Referee for the Colchester District of the Essex Provident Society, vice Williams, deceased.

MEASURES, J. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Wisbech Port Sanitary District, and Medical Officer for the Tydd St. Giles District of the Wisbech Union, vice Ewen, resigned.

THOMPSON, J., M.D., L.K.Q.C.P.I. & M.R.C.S., has been appointed Surgeon to the Borough of Leamington Police Force.

THOMPSON, J. E., A.B., B.Ch., has been appointed Resident Assistant and Registrar to the County Infirmary, Roscommon, vice Soden, resigned.

TRIMMER, H. B., M.D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the newly-arranged Gamlingay District of the Caxton and Arrington Union, Cambridgeshire, at £74 per annum.

WALKER, T. A., L.R.C.P.Ed. & L.M., M.R.C.S.E., has been appointed Medical Officer of Health for the Upper Sedgley Urban Sanitary District, vice Ballenden, whose appointment has expired.

WANKLYN, J. A., M.R.C.S.E., has been appointed Lecturer on Physics and Chemistry at St. George's Hospital Medical School, vice Noad, deceased.

WHITE, H. F. La Touche, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the newly-arranged First Division of the Caxton District of the Caxton and Arrington Union, Cambridgeshire, at £94 15s. per annum.

Births, Marriages, and Deaths.

BIRTHS.

ARBUCKLE.—On the 12th inst., at Thorne, Yorkshire, the wife of H. W. Arbuckle, M.D., of a son.

BOWES.—On the 4th inst., at Herne Bay, the wife of John Bowes, L.R.C.P.L., of a son.

DARKE.—On the 13th inst., at Salisbury, the wife of Fitzroy Philip Darke, M.R.C.S.E., of a daughter.

ILIFFE.—On the 16th inst., at Kendal, the wife of Walter Iliffe, F.R.C.S.Ed., of a son.

JOHNSTONE.—On the 15th inst., at Alton, the wife of J. J. S. Johnstone, M.D., of a son.

MACGRATH.—On the 20th inst., at Colville-terrace East, Bayswater, the wife of Dr. William Michael MacGrath, F.R.C.S.I. &c., of a son.

MILLER.—On the 17th inst., at Blackheath, the wife of J. N. Miller, M.D., of a son.

PERRY.—On the 15th inst., at Gunnislake, Cornwall, the wife of Charles E. Perry, Esq., Surgeon, of a daughter.

STOKOE.—On the 19th inst., at Beddington, the wife of Paul Henry Stokoe, M.D., of a son.

TONGE.—On the 15th inst., at Harrow-on-the-Hill, the wife of Morris Tonge, M.D., of a son.

MARRIAGES.

DAVIDSON—RUSS.—On the 21st inst., at Holy Trinity Church, Clapham, by the Rev. S. F. Bridge, Charles Davidson, F.R.C.S.Ed., of Hackney, to Gertrude Marian, second daughter of William Russ, C.E., of Cedars-road, Clapham-common.

HARDY—DACRE.—On the 22nd inst., at the Parish Church, Otley, Yorks, by the Rev. W. Riddale, M.A., William G. Hardy, M.B., of Start Villas, Bournemouth, to Annie, second daughter of the late John Dacre, of Otley.

JONES—WILLIAMS.—On the 17th inst., at Moriah Chapel, Carnarvon, by the Revs. Evan Roberts, of Carnarvon, and William Jones, of Port Dinorwic, Owen Thomas Jones, Surgeon, of Port Dinorwic, to Katie Williams, of Uxbridge-square, Carnarvon. No cards.

POPE—TOWNSEND.—On the 15th inst., at Old Edgbaston Church, by the Rev. H. A. Harvey, M.A., Vicar of St. Mary Magdalene, Oxford, assisted by the Rev. H. C. Ogle, M.A., Fellow of Magdalen College, Oxford, Harry Campbell Pope, F.R.C.S., M.B., of Shepherd's-bush, son of Edward Pope, Surgeon, of Tring, Herts, to Constance Nellie, daughter of the late Charles Townsend, Surgeon, of Birmingham.

DEATHS.

ADAMSON.—On the 11th inst., at Rathkeale, co. Limerick, Arthur E Adamson, M.R.C.S.E., L.K.Q.C.P.I., aged 36.

ANDREWS.—On the 14th inst., at Landport, John Andrews, Surgeon, aged 75.

BILLET.—On the 10th inst., at Taunton, James Billet, Surgeon, in practice prior to 1815, aged 90.

BOOT.—On the 18th inst., at Sleaford, John Hopkinson Boot, M.D., aged 68.

CARTER.—On the 16th inst., at Ulverston, John Carter, L.S.A.L., aged 66.

CURTIS.—On the 25th June, Joseph Lindsey Curtis, L.R.C.P.Ed., Surgeon-Major, Army.

GARRARD.—On the 15th inst., at Kington, Herefordshire, Pomonby, son of George S. Garrard, Surgeon, a student of St. Bartholomew's Hospital, aged 20.

GORDON.—On the 6th inst., at Tain, Ross-shire, William Gordon, M.R.C.S.E., aged 67.

HAMILTON.—On the 11th inst., at Chorley, Edward Palmer Hamilton, L.R.C.S.I., aged 39.

MORISON.—On the 17th inst., at Kirkcaldy, John Wemyss Morison, L.R.C.P.Ed.

NASON.—On the 13th inst., at his residence, Ashford, Kent, Charles Arthur Nason, M.R.C.S.E., aged 35.

PHILLIPS.—On the 26th ult., William Weld Phillips, M.R.C.S.E., of Farnsfield, Notts, aged 67.

RENWICK.—On the 22nd June, at Belize, British Honduras, Thomas Renwick, M.B., formerly of Glasgow.

SHAW.—On the 15th inst., at Elstree, Herts, Edward Charles James Shaw, M.R.C.S.E., aged 69.

SMITH.—On the 18th inst., at Ramsgate, Alexander James Smith, M.R.C.S.E., aged 22.

WALMSLEY.—On the 12th inst., at Hodnet, Salop, John Allen Walmsley, M.R.C.S.E., aged 54.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

Notes, Short Comments, and Answers to Correspondents.

THE STUDENTS' NUMBER OF THE LANCET will be published on Saturday, September 8th. Those gentlemen holding official situations connected with Medical Institutions in the United Kingdom, who have not yet forwarded the necessary information to our Office for publication in that Number, are earnestly requested to send it *without the delay of a single post.*

TREATMENT BY WITCHERY.

AN old man, a herbalist, has been tried by the magistrates of South Molton, in North Devonshire, for pretending to be, in spite of his unbewitching sex, a witch, and in that capacity to cure diseases. In one case he was sent for by the husband of a poor old woman, and, representing himself as only an humble instrument in God's hands, applied metallic rods to her body marked with the signs of the Zodiac. With all his pious pretensions he had an eye to profit. He demanded twenty-five shillings for his services, and during the five hours he was in the house consumed a glass of rum-and-water, with some biscuits. The remedies were ineffectual. The old woman died, and he was charged before the magistrates with using certain subtle crafts, means, and devices, by palmistry or otherwise, to deceive and impose on Her Majesty's subjects. For the defence it was urged that, at the outside, he was a mesmerist, and that mesmerism was, if not an orthodox, at least a recognised process of the medical profession. The magistrates thought otherwise, and sentenced the "white witch," as he is called, to a month's imprisonment. Notice of appeal has been given to the Quarter Sessions. The case is a phenomenon altogether discreditable in the latter part of the nineteenth century; and though we think with little satisfaction of the old herbalist being shut up for a month in prison, we shall not altogether regret it if it leads him to forsake the practice of such pious frauds as the above. There is much crass superstition among the people in country places, and those who practise upon it should be discouraged.

Forewarned, Forearmed.—We do not think it would be practicable, nor indeed advisable, to carry out our correspondent's suggestion.

THE INFECTION OF SCARLET FEVER.

To the Editor of THE LANCET.

SIR,—In a recent number of your journal (June 30th), "M.D." asks the very important question, How soon after an attack of scarlet fever, A., B., and C., pupils at a public school, may return to their families, which in each case include younger members who have not had the fever? From whatever point of view one regards this question, there can scarcely be a more important one raised, involving, as it may, the health, and possibly life, of other members of a family, and placing the medical attendant, advising on this point, in a position of the greatest responsibility. Dr. Longhurst, in your issue of July 29th, thinks that after a month, if precautions have been taken, the scarlet-fever patient may safely mix with the family. I think this period *much too short*, even where the most extreme care has been taken. I am in the habit of advising *three months*, and the following case, which has just occurred in my practice, is of great interest upon the point.

On the 19th of June I visited, at Clapton, A. W——, aged four years, and found her suffering from a severe attack of scarlet fever. It was the second day of the disease. Four other children were in the house, none of them having had the fever. The child got through the fever well; there was nothing particular about the case, and there was not much desquamation. After the first week the child had a hot bath, having Condy's fluid in, every other night. Complete isolation was observed, the child had a special nurse, disinfection was well carried out, every article in the room was well disinfected, and iodine vapour freely used in the room. On the 11th of August the child again mixed with her brothers and sisters, and on the 16th her brother, aged ten years, sickened, and next day the rash was out, fifty-four days after his sister showed the rash.

I am, Sir, your obedient servant,

Queen's-road, Dalston, Aug. 1877. FREDERICK H. DALY, M.D.

To the Editor of THE LANCET.

SIR,—Referring to Dr. Hollis's comment of the 11th inst. on my letter in THE LANCET of the 28th ult., I trust you will allow me to say that I think Dr. Hollis scarcely does justice to the scope of my communication when he says I assume that the scales of epidermis detached during the desquamation of scarlet fever are in every case non-infectious, "because" attempts at inoculation of the disease by introducing scales of epidermis under the skin of healthy persons have failed. That in itself is a strong point, and the next paragraph (*e*) of my letter is even stronger; but those are not the only ones on which my opinions are based, as must be evident from a careful consideration of the subject. With reference to the last paragraph of Dr. Hollis's letter, in which he says, "We shall certainly exceed the bounds of ordinary prudence if we permit a patient recovering from this disease to associate with his family during the period of desquamation," my experience is this—that by the time all fever symptoms have passed, the pulse and temperature having resumed their natural standard, and convalescence is established, desquamation is nearly if not altogether completed; and, given the first conditions, as I do not believe in the infecting power of the detached and effete cuticle, I should not think it necessary to impose needless restriction until every particle had separated.

I am, Sir, your obedient servant,

ARTHUR E. T. LONGHURST, MD.

Willow-street, S.W., August 20th, 1877.

HOSPITAL SUPPORT FROM FRIENDLY SOCIETIES.

IT is eminently satisfactory to recognise on the part of the working classes signs of the appreciation of their obligations to the medical charities from which they receive such constant benefits. It appears that in Richmond last week fifty representatives of the various Friendly Societies having members in the neighbourhood met for the purpose of organising a Friendly Societies' Infirmary Sunday. It was unanimously determined to accept the offer of the vicar to preach a special sermon at the parish church on the 2nd September, and that the members of the various Societies should meet, in regalia, on the green, and march to church in procession with bands. An expectation was expressed that the number of members taking part in this demonstration will not fall far short of a thousand. It is stated that the whole of the offertory is to be given to the Richmond Infirmary. This action on the part of the Richmond Friendly Societies will, it may be hoped, stimulate similar action among the members of Friendly Societies in other localities.

Dr. Buchanan, (Thirsk.)—It is impossible to express an opinion as to the nature of the case in the absence of direct observation. Clearly the excitement resulting from fever would not justify removal to an asylum.

Mr. Edgar Judson.—We do not recommend any physician or surgeon in particular.

WASHING FOR THE SICK.

To the Editor of THE LANCET.

SIR,—The extract from your paper in *The Times* of to-day corresponds with my experience of the way the poor accomplish washing. The whole operation in their hands becomes nullified. It ceases to be cleansing, and it does not pay in any sense to encourage it. In a sanitary point of view, the thing is so entirely bad that it should be put an end to. For some years I have been conducting an experiment for the purpose of employing women beneficially to themselves in pocket, morals, and health, and with pecuniary advantage to the institution in which it is done, besides giving the relief to indigent sick persons of washing their clothing and bedding at a cheap rate for them. In seeking to do this efficiently, I discovered several important matters connected with the cleansing of articles used by the sick and in the course of their medical treatment. This is now reduced to a science and practised at Nine Elms House, the laundry of the Discharged Female Prisoners' Aid. Things soiled in hospitals and private houses, with the excreta of patients, discharges from wounds, bleedings from operations, post-mortems, &c., are all received there for cleansing, and done so well that the business is increasing, and it is doing much good to the poor class willing for and needing such employment.

The process used reduces to a minimum the revolting nature of the labour. This will altogether disappear when science is applied in the gathering up of the articles in the hospitals. They are now sent off by nurses, who have yet to be instructed how to manipulate the things they remove from their patients. It is time to add to their course of instruction a chemically correct manner of separating soiled clothes, and delivering them so as to ensure their innocuousness to the receivers. The exercise of caution and much expertness enables the women at Nine Elms to immerse the articles in cold water, and, when steeped for several hours, exposed to the air, to subject them to a current of water, which carries away all the soluble and movable matter from the fabrics.

Classification of the soil should be taught the nurses. All sorts cannot be successfully treated alike. The albumen, the oil, the serum, &c., all require solvents of a different nature. We plunge all for safety into the water-tanks on arrival; but if they were sent sorted, we might be able to arrive at separate preparations to facilitate the cleansing of each. It does not at all imply that the texture runs the risk of injury by our using "preparations." My experience is that the scrubbing, boiling, &c., are just as dangerous to its durability, and less manageable. We use none whatever now of the chemicals that are suggested for "disinfectants" and "scourers." Our only formula is the water-bath, very copiously applied and very dexterously circulated, under the atmosphere, for at least thirty-six hours. The result is most satisfactory. I have myself seen living things in garments that have been in boiling tanks for above twenty minutes, and then dried in closets over 200° F. Now we apply steam at a great height of temperature to the damp articles, and we dry quickly at nearly 300°. This kills all creatures, and sends out the linen at all events safe for the present to carry no contagion. Nothing less than this amount of treatment can be trusted to do what is required for the cleansing of soiled clothes from either the sick or well. The products of perspiration, even when not accompanied by the sporules of disease, ought to be extirpated from clothing, in order to promote true cleanliness and good health in the community. This cannot be done by the ordinary washerwoman. She has no knowledge and no appliances wherewith to accomplish this end, and it is an end to which all people ought to be taught to aspire. Like other sanitary things, they rest content without it. It is to doctors we must look to open up the subject, and press it on the attention of the public. Even unprofessional workers may do much to attain safety from the transmission of sickness through clothing and bedding by attending to very simple rules. The use of air and water, properly applied, will answer so certainly that it is worth while to be trained in the process. Hospital nurses should pass through a course of practical washing for the sick. It is most remarkable that hitherto it has escaped the observation of the medical staff of our great charities that this branch of women's work is not effectively attended to. The expense of sending the things to the air and light of a country district is not the only hindrance to the right performance of the washing of our hospitals. It is chiefly the ignorance and impracticability of those who are sincerely anxious, but unable to get the work done, that interfere with it. It is within my knowledge that machinery and hand labour are in use in London hospitals without producing the desired effect either in cleansing or in economy of money. Intelligent, instructed, practical supervision is required to produce this. There is quite a demand for women who have practical knowledge of the work. It is a branch of employment for them not less honourable and useful than other service rendered to the sick. Trained laundresses as well as trained nurses will be wanted in the well organised hospitals of the future.

I am, Sir, your obedient servant,

Nine Elms House, Aug. 17th, 1877. SUSANNA MEREDITH.

THE EUCALYPTUS.

M. PLANCHON, the French naturalist, gives, in a late number of the *Revue des Deux Mondes*, some interesting particulars of the Eucalyptus, now extensively planted in California and some of the Southern States of America. The variety of the species which attains the greatest altitude is the *E. amygdalina*, which grows to the height of from 145 to 152 metres (the highest known building in the world—the pyramid of Cheops—is but 146 metres). The *E. globulus*, a smaller variety, though often taller than the celebrated Californian tree, the *Sequoia gigantea*, is cultivated on a large scale at the Cape of Good Hope, the southern coasts of Spain and France, in Corsica, and especially in Algeria. Young specimens of the eucalyptus are planted in the public squares in Paris as a movable summer decoration, and are great favourites with the citizens. In Valencia its reputed febrifuge virtues are so firmly believed in by the people that it has been found necessary to place a guard round each tree to prevent it from being stripped of its leaves. The Eucalyptus, says M. Planchon, is a rare example of a tree indigenous to Australia, which has become established in Europe, Asia, Africa, and America on account of its utility and beauty.

"MILK TAVERNS."

To the Editor of THE LANCET.

SIR,—Few will doubt the advantage of establishing "Milk Taverns," as THE LANCET has suggested. None would do so who had seen the successful carrying out of the idea in New York and other American cities. I saw this a few years ago. No intoxicating liquors were sold with the pastry, fruit, rice, ices, custards, coffee, tea, and chocolate, in these restaurants, where milk, iced and warm, was made the principal feature, in justification of the names of dairies, to which appropriate tassels were attached, as Devonshire, Shaker (a compliment to the purity of the articles grown by that community), Aylesbury, &c. The shops were large, inexpensively though gaily and tastefully fitted up with flowers and shrubs, but with no attempts at a theatrical farmyard scene—as in the cows' chalet, for instance, of the Bois de Boulogne Jardin d'Acclimatation. Quite in the New York taste, however, was the meretricious attire of the serving-women, young and pretty, in Swiss or English dairy-maid costumes. The originator profited largely during the season of summer, and his imitators had little cause to complain.

I visited some twenty, as well in the principal streets as in the business quarter, and always found them full at dinner-time (noon) and ten-time (five to six P.M.). The medical fraternity had anticipated your recommendation, and fostered the movement as an antidote to the drinking-bar and saloon attractions.

I have gladly noticed a marked increase in the consumption of milk by passengers, who call in not only at dairies but at many little grocers' and chandlers' shops for a glass. Such shops sell thus between one and two hundred glasses a day. The fear of the milk spoiling forces these small traders to be pretty clean with the cans; but the same attention does not always extend to the tumblers in contact with all sorts of persons in various states of health. Large establishments, conducted perforce with proper heed to cleanliness, would remove this possible source of danger and dissemination of contagion.

I remain, Sir, your obedient servant,
HENRY LLEWELLYN WILLIAMS.

Farringdon-street, E.C., Aug. 20th, 1877.

TUPELO TENT.

THE root of the tupelo tree, indigenous to the United States, is being used with success by American obstetricians for dilating the os uteri. It is said to be superior for this purpose to the sea-tangle, as its power of absorption is greater, it is as light as cork, and its fibre is fine-grained, capable of being made very smooth, and therefore easily introduced.

POOR-LAW MEDICAL WORK.

To the Editor of THE LANCET.

SIR,—The insufficient pay complained of by your correspondent, "F. A. B.," is among the least of the grievances of which those Poor-law medical officers who conscientiously perform their duties have to complain. It is useless to blink the fact that the acceptance of such an appointment does lower the professional and social position of the holder if he performs the duties personally, and it must necessarily be so as long as Poor-law inspectors and Poor-law guardians are indifferent as to whether sick paupers are attended by the principal or by an unqualified assistant. I believe the time has arrived for putting an end to this baleful practice, and it appears to me that, as a measure of self-protection, we ought to call the attention of the authorities to cases where our neighbours injure the status of ourselves and the whole profession by pursuing a practice which is in direct defiance of the orders and regulations they have undertaken to observe.

I am, Sir, yours faithfully,
August, 1877. AN EX-POOR-LAW MEDICAL OFFICER.

Dr. Thompson.—Some cases are well authenticated, as that of the widow of Sir J. E. Smith, who died upwards of 100 years of age. Edward Augustus Holyoake, M.D., LL.D., of Salem, Massachusetts, was born August 1st, 1728, at Marblehead, Mass. He died March 31st, 1829, aged 100 years and 7 months.

NUX VOMICA IN ALCOHOLISM.

To the Editor of THE LANCET.

SIR,—In THE LANCET of June 30th is a communication from Chas. H. Robinson, F.R.C.S.I., stating that capsicum in alcoholism in his hands was of no avail, and asking for a medicine that was in such cases. I can recommend nux vomica, which in my hands has done well, and in this climate seems to be what the system needs to fill the want. I use the fluid extract in from five to fifteen drop doses, three times a day, or every six hours, taken in water.

Yours respectfully,
GEO. HENDRY, M.D., &c.

Zilwaukie, Michigan, U.S.A., July 15th, 1877.

THE MEDICAL COUNCIL OF ONTARIO.

AT the annual meeting of the Medical Council of the College of Physicians and Surgeons of Ontario, held at Toronto on the 4th ult., amongst other business, the report of Dr. Workman on behalf of the Board of Examiners was read. The document gave a very favourable account of the educational advancement of the medical students. The total number of candidates who presented themselves was 194, of whom 186 passed—65 as first-year's men, 63 primary, and 80 finals. The proportion subjected to oral examination appears to have been small. In criticising the proceedings at this meeting of the Council, the *Canada Lancet* comments in a strain similar to that which we have found it necessary to adopt in reference to the Medical Council at home. Our contemporary says that every year it is becoming more apparent that the Ontario Council does not fairly represent the profession, and hopes soon to see some radical changes in its constitution—among other things, the according to each territorial division two representatives instead of one.

"NO INQUEST."

To the Editor of THE LANCET.

SIR,—The other night I was called to see a man who had been discovered dead in his room. On my arrival I found him stretched on the floor, and on the drawers close by was a glass containing a small quantity of gin. His wife, who found him, stated there was a bottle on the floor by his side also containing gin, which he was known to have purchased that evening.

The history of the case is, that he was seen two hours previous to my seeing him, when he was apparently in good health. He has had a fistula for some time, and lately complained to his wife of pain in the back and abdomen.

The coroner's officer called upon me the following day about my evidence (but said he did not think there would be a post-mortem, as the coroner did not like them), and promised to let me know when the inquest would be. Hearing nothing further in the matter, I made inquiries, and found no inquest had been held; but the death had been registered, by advise of the coroner, by the registrar of the district, without any medical certificate. Your opinion of this irregularity will oblige.

Yours truly,
August, 1877. VIGILANS.

*** There cannot be room for a difference of opinion on this case, as stated. The course pursued was indefensible.—ED. L.

A Student.—The papers and reports of Drs. Lewis and Cunningham will be found in the Annual Reports of the Sanitary Commissioner with the Government of India. These reports will, no doubt, be met with in one or other of the medical libraries of Edinburgh, to which "a Student" will have access; and a reference to a library catalogue will give him the farther information he seeks as to works on Cholera.

D.—D.'s conduct seems to have been most uncourteous, and to have merited the treatment which he received from the patient. Our correspondent would be justified, in the absence of any explanation or apology, in discontinuing professional relations with D.

"LOCUM TENENS."

To the Editor of THE LANCET.

SIR,—I am anxious to leave home for a time, not for mere amusement, but that various symptoms tell me it would be wise to get rid of for a time all the care and anxiety consequent upon the duties of my profession; but the getting away often depends, as in my case, on special engagements, and these render the possibility of a prior engagement with a "locum tenens" impossible. I cannot help believing that there must be in London many medical men who would gladly get into the country for a week or two, and take charge of practices for a fair remuneration where the duties are not very arduous, but who otherwise would be deterred by the cost.

I am, Sir, yours truly,
August, 1877. A COUNTRY DOCTOR.

MEDICAL ADVERTISEMENTS IN THE COLONIES.

THE following advertisements appear in the *Queensland Times*:—

"Dr. F. Hutchison, M.R.C.S. London, has commenced the practice of his profession in Ipswich, and may be consulted at Miss M'Laughlin's East-street."

"Dr. Aspinal, L.R.C.P. and L.M. Edinburgh, M.R.C.S. London, may be consulted at his house, at the corner of Roderick- and Thorn-streets, Ipswich, up to June 15th, when he will remove to the house now occupied by A. H. Barlow, Esq., Nicholas-street, Denmark-hill."

It does not do to apply to a recently organised colony rules which would be severely applicable to an old country. But we venture to say that even in Queensland the practice of advertising by medical men is unnecessary and undignified. Further, the use of titles should be regulated strictly by the nature of the qualifications. In this respect there can certainly be no difference between a colony and the mother country.

A Fellow, (Manchester.)—A very strong feeling on the subject was expressed at the meeting, and when going round the wards of the infirmary. It would be premature to ventilate the subject so early; but there is no doubt that in every respect the gentleman in question is well qualified for the seat. Messrs. Turner and Southam were both Manchester men.

CHINESE THERAPEUTICS.

To the Editor of THE LANCET.

SIR,—Your correspondent, Mr. J. Manley, may be reminded that I some few years ago published "Contributions towards the Materia Medica and Natural History of China" (Trübner and Co., London), which constitutes an alphabetically arranged "Pharmacopœia Anglo-Sinica." Dr. Bretschneider, of the Russian Legation at Peking, and Dr. Dudgeon, of the London Mission at Peking, have also written upon the subject of Chinese Pharmacy. Soubeiran and Dabry published at Paris in 1872 an octavo volume on the same subject.

Yours truly,
Shepton-Mallet, Aug. 21st, 1877. F. PORTER SMITH, F.R.G.S.

THE MEDICAL ACTS AMENDMENT BILL.

OUR attention has been called to a little looseness in the punctuation of our brief notice of the present position of the Medical Acts Amendment Bill, by which a misconception might be conveyed as to the cause of its withdrawal. This was not, it appears, directly due to the opposition of Mr. Serjeant Simon, which operated simply in preventing the second reading of the Bill owing to the shortness of the period before the termination of the session.

Mr. W. H. Whibeton.—1. Nervous System: Dr. W. A. Hammond. Ophthalmoscope in Nervous Disease: Dr. Clifford Allbutt.—2. Diseases of the Skin: Dr. Tilbury Fox.—3. Diseases of Women: Dr. Barnes. Diseases of Children: Dr. Tanner.—4. Diagnosis: Dr. Da Costa or Dr. Fenwick.

Mr. Stephen S. Chute.—The question has been frequently answered in our columns. It has been decided in courts of law that if an engagement has been distinctly made, the fee can, under ordinary circumstances, be claimed.

Chemicus, (Dublin.)—Yes, the "Agenda du Chimiste," published by Hachette. This little volume is quite a feat of accurate and comprehensive exposition.

ERRATA.—In Dr. Buzzard's case of Paraplegia in our last impression, eleven lines from the end, p. 238, for "considered improved," read "considered unproved."—In Dr. Neale's description of a combination pessary on page 262 in our last number, the word "retroflexion" should be substituted for "prolapsus" in fourth line from bottom of first column.—Mr. Wm. Hall Stowell, it appears, passed the *final* examination for the L.R.C.P. and L.R.C.S. Edin. at the recent sittings of the examiners, not the first professional, as stated in our last.

COMMUNICATIONS not noticed in the current number shall receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. T. Chambers, London; Dr. Dupré, London; Mr. F. Livesay, London; Mr. R. Cory, Lambeth; Mr. McGill, Leeds; Mr. Stowell, Paddington; Mr. Gream, Beverley; Messrs. Henry and Son, London; Messrs. Allen and Son, London; Dr. Dyce Duckworth, London; Mr. Evans, Anglesey; Mr. Edlen, Haverfordwest; Dr. R. Neale, London; Mr. Langdon, Marseilles; Mr. Owens, East Farleigh; Dr. Thompson, Leamington; Mr. Brown, Tredegar; Mr. O'Connell, Chicago, U.S.A.; Dr. Oliver; Mr. Williams, London; Mr. W. Armstrong, London; Mrs. Adamson, Rathkeale; Mr. Spanton, Hanley; Mr. Perry, Gunnislake; Mr. Grabham, Newcastle; Mr. F. Page, Newcastle; Mr. Bryant, Clapham-road; Mrs. Meredith, London; Dr. Daly, Dalston; Mr. E. Judson, Blackheath; Mr. Graham, Liverpool; Mr. Simcocks, Drogheda; Mr. L. Tait, Plymouth; Mr. Hinds; Dr. A. Longhurst, London; Mr. Alford, Haverstock-hill; Dr. J. C. Steele, London; Dr. May, Maldon; Mr. Eberle; Mr. Roberts, Buckhurst-hill; Mr. Holmes, Blockley; Mr. Snell, Sheffield; Dr. Buchanan, Glasgow; Mr. M'Carthy, Oakengates; Mr. Swales, Sheerness; Mr. Chute, London; Mr. Jones, Alcester; Messrs. Zimmerman, London; Mr. Grote, Newcastle; Messrs. Crispen and Hancock; Messrs. Hilliard and Sons, Glasgow; Mr. Hill, Camberwell; Mr. Greenwood, Liverpool; Mr. Clutton, London; Mr. Speakman, Nantwich; Dr. Maynard, Bishop Auckland; Mr. Parker, Bath; Dr. Struthers, Aberdeen; Mr. Smith, Shepton-Mallet; Dr. Guppy, Falmouth; Mr. Fisher, London; Mr. F. G. Long, Lincoln; Dr. Loyd, Lambeth; Mr. Davidson, Carlisle; Mrs. Nason, Ashford; Mr. Moody, Grimsby; Mr. Glyde, Ipswich; L.S.A.; Inquirer; Weymouth; A Student; A. M. D.; Medicus, Slaithwaite; Vigilans; Ignoramus; A Country Doctor; M.D.; R. T. J.; Forewarned Forearmed; J. V., Swansea; M.D., London; Assistant, Dover; Doctor; A. B. C.; R. O., Cardiff; One of Mr. Alexander's Selected; A Very Old Subscriber; Médecin, Dorchester; L.M., Tunstall; &c. &c.

LETTERS, *each with enclosure,* are also acknowledged from—Mr. Kinctone, Bedford; Mr. MacGrath, London; Mr. James, Blackwood; Mr. Hughes, Port Dinorwic; Mr. Johnston, Glasgow; Mr. W. Youldon, London; Miss Potts, Newcastle; Mr. Garrard, Wellgate; Dr. Barker, Brighton; Dr. Pugh, Leixlip; Dr. Buckell, Nottingham; Mr. Walker, Manchester; Mr. Bealton, Lerwick; Mr. Gentles, Derby; Mr. Dryland, Kettering; Dr. Ritchie, Otley; Mr. Duke, Wells; Mr. Hemming, London; Mr. Jones, Llanfyllin; Mr. Harkuss, Leipsic; Mr. Sers, Epperstone; Miss Batewell, Stone; Mr. Glanvill, Adelaide, South Africa; Mr. Williams; Mr. Duncan, Tunbridge Wells; Dr. Gilmour, Staunton; Dr. Dunkinson, Edinburgh; Mr. England, Moulton; Mr. Davis, Torquay; Mr. Drayson, Reading; Mr. Cole, Hatton; Dr. M'Bride, Wigtown; Dr. Crowther, Manchester; Mr. Hudson, Epworth; Mr. Knapp, Portsea; Mr. Boyce, Shrewsbury; Mr. Looker, Wheelton; Messrs. Grace, Bristol; Medicus, Alford; M. B., Cardiff; G. E. H., Upper Norwood; D. S. M.; M. D., March; Medicus, Huddersfield; G. H., Derby; X. Y. Z., Hucknall-Torkard; C. G. S., Tunbridge Wells; M. A., Conway; D. G., Cromer; Studens, Derby; Beta, Liverpool; Omega; N., Shandon; M. B., Notting-hill; B. A. F., Gainsborough; M. S., Belfast; W. R., Romsey; D. H., Trowbridge; Medicus, Rotherham; M. A., London; Medicus, Grimsby; A. Z., Manchester; M. D., Leicester; G. H. T., Hythe; M. G.; Alpha, Derby; Boto; M.R.C.S., Peterborough; Medicus, Walsall; J. W., Camden-road; Medicus, Aldgate; L. M.; M. B., Hamstreet; A., Sevenoaks; A. B., London.

Hampshire Post, Civil and Military Gazette, Financial Opinion, Welshman, Hornet, Solicitors' Journal, Liverpool Post, Western Morning News, and *Bradford Observer* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, AUG. 23RD, 1877.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Aug. 17	29·95	W.	59	65	111	75	56	...	Cloudy
,, 18	30·10	W.	60	64	109	78	56	...	Cloudy
,, 19	29·75	S.W.	68	76	109	78	62	...	Overcast
,, 20	29·83	S.W.	66	70	112	82	63	...	Cloudy
,, 21	29·55	S.W.	63	69	114	77	64	...	Cloudy
,, 22	29·64	W.	60	63	112	74	59	0·32	Cloudy
,, 23	30·01	WNW	53	57	106	69	50	0·02	Fine

Medical Diary for the ensuing Week.

Monday, Aug. 27.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

Tuesday, Aug. 28.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Aug. 29.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Aug. 30.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Aug. 31.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Sept. 1.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

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Agent for the Advertising Department in France—

Mons. DE LOMINIE, 208, Rue Grenelle St. Germain, Paris.